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General Scientific

MODERN METHODS IN OBSTETRICAL AND GYNECOLOGICAL TEACHING.

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Medical education of to-day differs widely from that of twenty-five years ago, not only in the higher requirements for the admission to the study of medicine, but in the thoroughness and completeness of the curriculum. The wave of efficiency has even extended to the medical school, and yet, with it all are we making better doctors? Is the same type of man studying medicine, as formerly? Both of these questions will be answered in the course of time. Certainly, the recent graduate is better equipped to commence the practice of medicine, even though he has not been fortunate enough to secure a hospital internship, than was the graduate of twenty odd years ago, who was the recipient of but two courses of didactic lectures, repeated each year, on the seven major branches. Many students who left college with honors had never seen at close range a fracture or listened to a heart, or even been present at a delivery.

All this has changed. With the increased requirements has come the modern medical school, with its anatomical, physiological, biological, pharmaceutical, pathological, bacteriological, chemical and clinical laboratories, its hospital and out-patient clinics, all under single control. The student begins his work as an investigator, he proves by his own observations in the laboratory the stated fact, while didactic teaching has been more or less relegated to the past.

As early as the middle of the last century, however, some of the leading minds of the time had already conceived the advantage to be gained from and the necessity of the unit plant for teaching medicine. This was instanced in 1858, when the trustees of the Long Island College Hospital, at the suggestion of the Medical Council, organized a hospital and medical school under the same roof; to care for the sick poor, to teach students clinical medicine by bedside instruction, and to train nurses in the care of surgical and medical cases; this pioneer work in clinical teaching should justly be credited to Dudley, Armour, Hutchinson and Frank Hamilton.

Instruction in obstetrics and gynecology has kept pace with the advance in other branches, and received much attention in the modern medical scheme, and rightly so, for no branch of medicine is so poorly practiced as is obstetrics. Bad midwifery is the cause of from 25 to 30 per cent. of the invalidism among women, and it produces a large part of the daily work of the gynecological surgeon.

In Europe, much of the midwifery is relegated to the midwife, who is perfectly trained and thoroughly skilled in abdominal diagnosis, pelvimetry, and relative fetometry. Meddlesome interference is therefore less frequent, as all border line cases are given the test of labor, and their conduct is intelligently watched by the midwife until there is evidence of dystocia.

Patience, asepsis and a reliance on the natural forces are basic principles in foreign obstetrics (here every physician considers himself competent to conduct a complicated labor without previous knowledge of the pelvic and foetal relations, and only when it gets to a point where the mother's life is in question, will he call competent counsel).

Why is this so? Can it not be remedied by better medical teaching in our medical schools, and education of the public to the fact that obstetrics require skill, hence the remuneration should be commensurate with the gravity of the case. Few men will open the abdominal cavity without a previous surgical training and the observance of the most conscientious technique, yet the same men will attend an obstetric case, put on forceps, produce lacerations, without any knowledge of the actual diagnosis and without regard for asepsis or antisepsis.

At the Long Island College Hospital we are attempting to teach our students by practical demonstration, the significance of midwifery, and that the attendance on an obstetric case is a surgical procedure, fraught with dangers as great as those attending a simple celiotomy.

The work is begun in the latter part of the sophomore year, by the study of pelvic and fetal anatomy, the diagnosis of pregnancy and the physiology of pregnancy,

the single men is 51. The mortality rate among widow-

which is then ignited and allowed to burn itself out.

labor and the puerperal state. The class-room work is recitative, illustrated by models, charts and wet specimens. As soon as the fundamentals of the maternal and fetal anatomy have been mastered, the subjects of presentation, position and posture, and the mechanism and management of normal labor are taken up and taught upon the phantom. The student has daily practice in making abdominal and pelvic examinations on the manikin, thus familiarizing himself by touch as to the feel of the several fetal parts and their relation to their maternal hard parts. Pelvimetry and fetometry receive daily attention in the laboratory on the dried pelvis and prepared foetus and in the clinic on the living subject.

During the student's junior year he receives lectures and demonstrations on the pathology of pregnancy, the pathology of labor (malpositions and malpresentations of the fetus), the pathology of the puerperium, and finally upon obstetric surgery. The course is supplemented by daily drills on the manikin, in which the student is taught to recognize, by abdominal and vaginal palpation, the several malpositions and pelvic anomalies. He is further drilled in the indications for operative intervention and the technical details thereof are thoroughly discussed, and the operative procedure done by the student under the direction of the instructor.

Our experience has shown it to be unwise to allow the student to do clinical work in the wards, and in the out-patient service, until he has completed his theoretical course and manikin training. With this knowledge he is prepared to intelligently observe the clinical phase of the subject, furthermore, the patient's interest, which to us is paramount, is better conserved by strictly observing this preliminary training.

In our opinion, inducive teaching should supplement a thorough knowledge of the essentials. The value of the manikin drill, we fear, is not properly appreciated by obstetric teachers. On the manikin the student is taught to recognize the several positions, presentations, and the different postures, to determine the relative position of the presenting part to the pelvis, and in the pelvis, the manual method of evacuation of the uterus in abortion, the application of forceps in the several pelvic planes, to the engaged or engageable head, the several methods of version, breech extraction and the delivery of the after coming head, with extended arms, the management of the placental stage and the control of the postpartum hemorrhage, by manual compression of the uterus, and the intra-uterine tamponade. He further learns the operative procedures, such as the introduction of the dilating bags, the application of forceps, the performance of version, pubiotomy, vaginal caesarian section, abdominal hysterotomy, craniotomy and embryotomy, with the indication for each in the hypothetical cases presented by the instructor. All of these procedures are done by the student on the manikin, before he is permitted to see their clinical application in the maternity service. Another valuable adjunct to our laboratory teaching, is the use of glue and plasterine models of cervical and perineal lacerations. With these models it is possible to teach the student the pathology of recent cervix and pelvic floor tears and have him repair the injury, so that he gets a conception of the pelvic pathology, together with the methods of correction. When this course has been completed and he enters his final year, we have a man who is at least equal in theoretical knowledge to a foreign midwife, except that he has a greater sense of his own importance; a dangerous state of mind for the tyro, but difficult to overcome in this country.

In his final year, he begins his clinical training by daily work in the out-patient obsterical clinic; here he studies upon the patient, the mammary, the abdominal and pelvic signs of pregnancy; he inspects, palpates and ausculates for himself, in accordance with a definitely described plan and is called upon to record what he observes. He practices pelvimetry, fetometry and the diagnosis of presentation, and the position of the foetus by external examination. He examines the secretions, the blood and discharges of the patient in the obstetric laboratory. He is trained in the use of hemoglobinometer and blood pressure apparatus. By exacting this detailed routine we hope to inspire the student with the spirit of individual research, beside teaching him by practical demonstration, the proper care of the antepartum patient who may place herself in his hands. He next has his maternity service in the wards of the hospital, where he studies the phenomena and management of labor and the puerperium, and is drilled in the details of aseptic technique, as to the technique of hand cleaning, sterilization of instruments and dressings and the preparation of the patient for vaginal examination and labor. This instruction is followed by his assignment to the out-patient obstetric service; here the student, under the guidance of an instructor, makes the preliminary examinations, conducts the labor and follows the case throughout the puerperal period. He fills out a case record of his observations, which is approved or disapproved by the instructor on the dismissal of the patient. Should the case necessitate operative intervention, she is brought to the hospital and delivered by the instructor, with the assistance of the student originally assigned to the case. In addition to this, throughout the senior year a weekly conference is held, at which the cases occurring in the hospital wards, or in the out-patient service, are reported, and the conditions so far as possible duplicated on the manikin. The indications for intervention are discussed, and the methods of treatment detailed and demonstrated by the student who has been present at the delivery, the work is then critcised by the instructor.

Methods of Teaching Gynecology: The plan of teaching gynecology is similar to that in obstetrics, as it includes both didactic and clinical instruction. The course is begun in the junior year, and consists of didactic lectures and recitations on the essentials of diseases of women; particular attention is given to the study of pathology of gynecological conditions, shown by charts, models and pathological specimens. After mastering this theoretical data, the practical work is conducted in the dispensary clinics, where members of the class, in small sections of four or six men, make personal examinations of the patient, and are trained in history taking, diagnostic methods, both clinical and laboratory, and in the technique of asepsis in gynecological manipulations. The student is next assigned to work in the hospital wards, and given a case to work up for one of the clinics. There are three operative clinics each week; this means that at least six men a week are on ward work.

When assigned to a case the student takes the history, makes the physical examination, and an examination of the blood, urine and of the bacteriology of the discharges. He records his findings on a special history blank, and when the patient is brought to the operating room, has the opportunity to re-examine her under an anesthetic, and then having donned a sterile gown, is permitted to see the operation at close range and confirm or disprove his diagnosis by the living pathology; the pathological specimen is then turned over to him

and under the direction of the instructor is worked through in the laboratory.

He records the steps of the operation on the patient's history, from the dictation of the operator. When the patient leaves the operating room and returns to the ward, he has the opportunity to follow her daily after-treatment. In addition to this personal work, once each week, a small section made up of the men who have prepared the clinical material for the clinics of that week, go through the ward and see, suggest and criticise, under the direction of an instructor, the cases which they have seen, operated or treated.

We do not believe that clinical lectures to a class of fifty or one hunderd men or operations performed in the ampitheatre, have any value in modern teaching. On the other hand, the assignment of students to specific cases, permitting them as we do, to follow the patient from her admission to her discharge, encouraging him to work up the case, places the student in such a position before his fellows and his instructors, that he makes every effort to make the report of his case the best.

In addition to this clinical work, which is carried out throughout the term, one hour a week is given to a clinical conference, at which the cases which have been seen, operated or treated in the wards or clinics are reported, discussed and critcised.

We believe, from our experience, that clinical material used in the foregoing manner, affords the student the greatest benefits. The patient is also a gainer, owing to the painstaking and critical observation which has been given her, both in the preparation of the case by the student for presentation, and again, when his deductions are analyzed by the instructor.

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SARATOGA AS A HEALTH AND RECREATION RESORT.

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The status of the health resorts of this country is deplorable, especially so with regard to those containing mineral springs. This is not an ex cathedra dictum; is based upon the following facts:

First. There is not a single medical society devoted to this interesting branch in our country. The American Climatological Society, originated for the purpose of enlightening its members upon the health resources of this country in relation to places whose climate may be utilized by health seekers, offers in its transactions so small a number of discussions on this and kindred subjects that it may really be called, as its able ex-president, Doctor Babcock, has said, "A Tuberculosis Society."

There is no balneological society here, while all European countries have flourishing societies devoted to mineral springs and cognate subjects. An international congress has recently convened in Berlin and I have been requested to head a committee to furnish members and papers for another to convene in Madrid next October. So insignificant is the interest in the United States on hydrology, climatology, etc., that I am compelled to decline the honor.

Second. When I accepted the chair of hydrotherapy in the College of Physicians and Surgeons of Columbia University I addressed seventy letters to mineral spring proprietors in order to obtain data for a series of lectures. Information was requested upon the climate, average temperature and barometric data, the latest analysis of the spring water and by whom made, the therapeutic qualities claimed and the name of physicians and sources of their diploma. Imagine my disappointment when among the few laudatory replies, not one furnished accurate and recent analysis. The lectures were not undertaken.

The question arises why in a country blessed with a variety of climates, of mountain, sea and plain, and with a greater variety of mineral springs than any in the world, with good physicians and hotel men filled with energy and shrewdness, has not one dependable health resort to which a family physician may as confidently send his patients as does a doctor in Germany?

Time does not permit a detailed answer to this question. The principal reason lies in the unwise management by municipalities of this precious asset, by reason of which they have permitted exploitation of the springs without proper medical supervision and without due regard to the misrepresentation often resorted to by commercial interests. The Hot Springs of Arkansas represent the only health resort in this country which is endeavoring to furnish accurate data under government supervision. Here, too, the people of the town manifest a silent but effective opposition to thorough investigation of the physiological action and clinical results of the waters, which was long urged by the late medical director, Major Harry Hallock, U. S. A.

Saratoga Springs, on the contrary, courts investigation. The analysis of its waters may be relied on, because it was made by disinterested chemists of the State Health Commissioner's laboratory. This is the only instance of the kind to my knowledge.

Third. The average doctor at an American health resort does not attempt to make a specialty of his work, as is done in Europe. Among all our ologies, there exists none on balneology, while in Europe journals devoted to the subject are filled with contributions from spring physicians, many of them professors in the universities and the majority of the medical men at health resorts devote a portion of the winter to laboratory and chemical study at the universities. I am glad to learn that many Saratoga colleges have pursued this practice. Many of the Germans utilize a portion of their vacation by reading papers on balneology before medical societies. A bath almanac of 680 pages is annually published, giving authoritative details of every phase of the subject. The location, air and water temperature, therapeutical resources and indications, analyses of the waters, a list of sanatoria and of physicians in order of duration of their residence, names of hotel, opportunities for recreation, of fees called "A Kur Tax," and opportunities for divine worship are furnished. This book is sent to every German physician and to all prominent foreign physicians. To the American doctor, the therapeutic resources of his own springs and health resorts are terra incognita.

Fourth. A large share of the failure of many resorts supplied with excellent springs, must be charged to the hotel proprietors, many of whom naturally prefer holiday crowds of gay pleasure seekers, enjoying the gambling, the races and wine dinners to invalids in search of health, and others who seek recreation. A combination of these three elements must result in failure, owing to temperamental incompatibility of these types of guests. The health seeker who has been ordered by his physician to retire at 9 p. m. and rise at 6 a. m. for his morning promenade to the spring is distressed by the concerts and dances that delight the pleasure seeker.

If Saratogians insist upon this combination which has proved fatal to its fair fame, both as a health and

a pleasure resort, then let them build hotels removed like Pupp's at Carlsbad, or the Augusta-Victoria at Wiesbaden, from the crowded centres but within reach of amusements, provided with all the comforts that insure calmness of environment to the health and recreation seeker. The environment presented a decade ago in springs like Carlsbad, Marienbad, Nauheim, Salzbrunn, Wiesbaden, Homburg and Ems may be imitated, with advantage. The more recently constructed hostelries, with their glare and glamor, noise and confusion, should be avoided; they are now ruining the reputation of such health resorts in Germany. Let Saratoga Springs in this effort of rehabilitation steer clear of these pitfalls. There is no resort in the world which presents such facilities for segregation of different types of visitors as does Saratoga. A study of the comprehensive scheme of parks shown with last report of the Reservation Commission sufficiently illustrates the possibilities of Saratoga as a health and recreation resort.

In an article on mineral springs contributed to Hare's American System of Therapeutics, first edition, I made bold to offer as a fact the result of 25 years' observation that it is more important for the family physician who sends a patient to a health resort to be informed on the mental composition of the doctors than to know the chemical composition of the waters. And I reiterated this idea when invited to address the Carlsbad Medical Society in 1907; I there mentioned that not rarely patients in New York desire to know why they should go to Carlsbad when they may obtain its waters here. My reply to this question is that the water, though an important element of the treatment, must be administered by physicians skilled in their prescription. Moreover, the environment of Carlsbad, its charming scenery, its interesting promenade, its air of discipline and what is perhaps more important, the real discipline of the blunt martinet doctors over the patient who is made to realize that his one purpose in life is to regain lost health—these are elements lacking in America.

Be admonished to treat the patient and not the disease and to avoid therapeutic enthusiasm. One finds in the advertisements of all springs a laudatory strain that excites doubt. It cannot be denied that there are few if any springs in the world that offer a wider field for therapy than those in Saratoga. Let me refer to the difference in sodium chlorid content between the old Red Spring (17.96 grains per gallon) and that of Hawthorn No. 2 (630.19 grains per gallon). One would not prescribe the Hawthorn No. 2 for a case of nephritis with tendency to edema, while the Red Spring would be useful as a diluent and eliminator of excrementitious products. Saratoga has the weakest and strongest ferrous bicarbonate waters, ranging from the Emperor Spring, with its .80 grains to the gallon, to Flat Well No. 2, with its 45 grains to the gallon, which offers an iron water very nearly like that of St. Moritz to which thousands flock every year.

My studies of the subject point to saline springs as the most valuable for the largest number of ailments among our people. Those of Saratoga, especially Hawthorn Nos. 2 and 3, Adams and Flat Well No. 2, are similar in composition and temperature to those of Homburg and other springs indicated in gastro-intestinal disturbances, nervous dyspepsia, diabetes, gastric-catarrhs following alcoholic excesses and in many diseases characterized by faulty tissue change.

Dr. Thelenius, a high authority on balneology, claims that "to sodium chlorid may be attributed the most important effects of nearly all mineral waters." When this important constitutent of all body fluids is mingled in a natural cold mineral water with an abundance of CO_2, which always conduces to rapid absorption, we have the most perfect combustion of a mineral water for the most needed therapeutic uses. Their judicious use produces almost invariably enhancement of nutrition despite slight loss of weight in the beginning. Increase of urea and uric acid, improved glandular activity together with increased intestinal osmosis mark the action of these waters. As laxatives they are not so powerful as the waters containing sodium-sulphate, because the salines are readily absorbed from the upper intestinal tract. This fact imparts to them superior physiological action, by reason of which the occasional early loss of weight is quickly compensated by improved appetite and assimilation. These waters may be advantageously given to arouse stagnant tissue metamorphosis, even in depreciated individuals.

It has been regarded as a paradox that in the catarrhal conditions of the stomach which are frequent sequels of alcoholic indulgence, these sodium chlorid waters increase hydrochloric acid, while in the hyperacidity of neurasthenics they appear to diminish it. There are no paradoxes in science. In the former type of cases, the alkaline and saline waters dissolve and wash out the gastric mucus almost as thoroughly as lavage. The result is removal of this obstruction from the peptic glands. In the hyperacidity of neurasthenics on the other hand, the favorable environment at the springs together with the enhancement of appetite and improved circulation neutralize the defects in the nerve-centres and remove neurasthenic hyperaesthesia of which the gastric disturbance is but one manifestation.

In the whole field of hydrotherapy, these apparent paradoxes admit of simple solution on physiological and clinical grounds. On these principles also may be explained the so-called paradox with regard to the vaunted efficacy of sodium chlorid waters in constipation and in diarrhea. In the former they may be continued through the entire cure, gradually diminishing them while teaching the patient regularity of habits and dietetic rules. Herein lies probably the almost universal idea that the beneficent results of a mineral spring cure is more obvious, after departure from the the springs. This is true if the patient obeys the physician's instructions. In diarrhea, on the contrary, it is advisable that the laxative waters be discontinued after the intestinal canal has been cleared. Intervals of several days during which level teaspoonfuls of bismuth may be useful several times a day should be followed, if the disease persists, by another course of the waters. The interdiction of fats when these waters are taken freely, on the ground that fat by assimilation is counteracted by them is an error. German doctors permit fat and even raw foods if not otherwise contraindicated. In chronic gout, or in the gouty diathesis the sodium chlorid and alkaline waters are justly in great repute; in obese persons they further the reduction of fat without impairing muscular tissues, under proper diet and exercise.

I have never been convinced of the reputed favorable influence of alkaline waters upon abnormal laryngeal and bronchial conditions. The theory that they exert a specific influence upon the bronchial secretions and the ciliary epithelium is far fetched, especially as the mineral constituents of springs like Salzbrunn and Ems are not abundant. But the clinical fact that many of these cases improve in local manifestations and general conditions is undeniable. It is probably due to skillful medical management.

Observations made in a prolonged visit to thirty mineral springs in Germany and Austro-Hungary lead me to the conclusion that Saratoga Springs may with great promise of success become a noted resort for *all maladies arising from faulty tissue change,* but especially from *obesity.* To aid the natural advantages of air, climate and waters, there is need of an institution for obtaining the most abundant cutaneous and glandular activity. The conventional Turkish bath too often fails of accomplishing reduction, because oxidation is handicapped when the patient breathes the super-heated air of the hot room which contains only one-half or less of the normal quantity of oxygen, and where he inhales the exhalations from numerous neighbors. To obviate this objection, I have devised a procedure from which the disagreeable hot room is eliminated. It is replaced by a hot box, containing air heated to 170 or more degrees, a temperature which could not be borne in a regular hot room. The head is outside of the box, exposed to pure air, the cooler and more oxygen containing the more effective for oxidation. The heat is provided by ordinary radiators or electric light. This hot air bath produces enormous perspiration—I have frequently recorded the loss of three pounds. After he issues from the box the patient receives a circular douche, or needle bath, of 100° F., under 20-pounds pressure, gradually reduced in the temperature to 90° F. in the course of a minute or more. This is succeeded by a fan douche under 20 or 30 pounds pressure for 30 to 60 seronds. In subsequent treatments, a strong jet douche over the entire back and muscular parts of the limbs is added to produce tonic muscular contractions. The plunge is unnecessary. This method does not increase the appetite so decidedly well as the quantity, preventing accretion of fat, by diminishing food consumption, which must be limited.

Nor is the patient permitted to lounge in a rest-room for hours. The continuation of the initiated tissue change and fat combustion must be insured by gentle exercise in the cool air. True, this type of reducing bath may not be popular with the Turkish bath fiends. For those who use the latter for luxurious enjoyment, a shampoo table may be provided upon whilh they may be rubbed and scrubbed to their heart's content, and the shampoo may be followed by the shower, plunge and rest they desire. Protest will arise from those who have been accustomed to the regular Turkish bath. They will insist upon cooling off before leaving the house. Apprehension of colds, pneumonia and all manner of danger may be expressed, all of which may be met by the simple fact that the so-called cooling room really neutralizes refreshment and actually furthers instead of preventing colds. The luxurious prolonged reclining in a warm room, not infrequently accompanied by indulgence and alcoholics, relaxes the body and furthers accumulation of fat and products of retrograde tissue change. It does not prevent colds. Lest this statement be regarded as theoretical, I would offer the records of an institution in which no cooling room exists, the Hydriatic Department of the Riverside Association at 259 West 69th Street, New York. Recently I figured the number of this type of baths taken during the past 31 months, and found it to be 4,924 men and 3,248 women. I have heard no complaint of colds. I am safe in saying that if I had not tired of the figures they could have been brought up to 50,000 during the last fifteen years.

I would suggest that Saratoga select the disease of tissue change, corpulence, rheumatism, gout, dyspepsia, gastro-intestinal catarrhs and allied diseases, as its specialty, just as is done by Homburg, Kreuznach, Kissingen and other renowned springs. Saratoga needs a large institution in which various remedial measures like electricity, massage, Swedish movements, etc., may be scientifically administered. No health resort relies upon its springs alone for its reputation. What the Germans call Terrain Kur in which measured walking paths provided with idyllic places, whereby exercise may be methodically prescribed, form an important adjunct of many health resorts. Carriage roads should be avoided. I devised such an arrangement at Passo Robles, California, Springs, which I organized in 1906. To the absence of these facilities gentle exercise without fatigue among beautiful scenery and neglect of other remedial agencies at our springs, may be attributed the disinclination of our people to visit them and their preference of foreign health resorts despite the large outlay of money and comfort involved.

The radio-activity of some of the Saratoga waters I would add, fit this resort peculiarly for the bath treatment of rheumatism and gout which may be as successfully managed there as at the hot springes, since the mineral ingredients are never absorbed and the temperature may be supplied artificially, without impairing the radio-activity which plays the chief role, aside from the strong CO_2 content.

The rehabilitation of Saratoga Springs for health resort purposes has now been well inaugurated by the State Reservation Commission. Results will accrue to the entire nation, for many of our people will be spared the necessity of crossing the ocean in anxious search for health and strength.

51 West 70th St.

Intestinal Transplantation.

J. S. Horsley, Richmond, Va., reports the results of experiments with transplantation of the ileum of dogs after excision of the sigmoid. From his first experiments on dogs it appeared that transplantation of a segment of the small intestine was not satisfactory because of its lesser diameter and inability to resist the impact of the hard, dry fecal masses. In order to overcome this it was necessary to deliver the fluid fecal contents directly into the distal end of the excised sigmoid. This was accomplished in nine dogs by cutting the ileum across at the ileocecal valve and transplanting it into the distal end. The end of the descending colon or upper stump from the excised sigmoid was then drained by a lateral anastomosis into the ileum. Six of the nine dogs experimented on survived the operation and were killed at varying periods afterward. The openings were satisfactory and the intestine was well nourished in each case. The steps of the operation in order are given as: excision of the sigmoid, closure of its proximal stump, division of the ileum about 2 inches from the ileocecal valve, closure of its distal stump, union of the ileum to the lower end of the sigmoid, and lateral anastomosis between the ileum and the descending or transverse colon.—(*J. A. M. A.*, August 23.)

Probably the most extensively used of all methods in Roentgen diagnosis is Haudek's double meal. A Rieder meal is given and at the end of six hours the motile power of the stomach determined by the amount of residue; then the meal is repeated and observations, made immediately, determine the form, size, position, etc.

Repairing a lacerated cervix will not cure a general ptosis of the abdominal viscera, but it will lessen the liability of that cervix to cancer.

THE MENTAL AND MOTOR EFFECTS OF CAFFEIN.

J. M. FRENCH, M. D.,
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In an article in Merck's *Archives* for July, 1907, the writer thus summarized the physiological action of caffein:

1. *On the Central Nervous System.*

Small doses stimulate the mental functions, so that the thoughts flow more easily and rapidly, the ideas become clearer, fatigue and weariness disappear, sleep is banished, and there is a distinct gain in the power for mental work. The capacity for physical exertion also is increased, and even the special senses are rendered more acute.

Large doses produce an effect somewhat resembling that of strychnin, the reflex irritability being much increased, sometimes to the extent of producing convulsions. Upon the sensorium it produces headache, confusion of ideas, and sometimes even delirium. Comparing its action with that of strychnin, caffein acts more on the cerebrum, strychnin more on the spinal cord; caffein more on the psychical functions, strychnin more on the vital and reflex functions.

2. *On the Muscles.*

Here it acts in small doses to produce increased irritability and greater power for work; and in large doses to produce rigidity and stiffness, with diminished capacity for work.

3. *On the Circulation.*

Moderate doses produce an accelerated action of the heart, and this effect is probably due to its direct action on the heart muscle. When large doses are taken, the heart becomes weak and irregular, and after death is always found in diastole.

4. *On the Respiration.*

The respiration is quickened and strengthened by small and moderate doses of caffein, and depressed by large ones.

5. *On the Kidneys.*

Caffein greatly increases the secretion of urine. The fluid constituents are increased in the greatest degree, although the solids are also increased, but in a less proportion.

In a noteworthy monograph on "The Influence of Caffein on Efficiency," published in 1912, Hollingsworth of Columbia University, has recorded the results of what is perhaps the most thorough and satisfactory study of the effects of caffein on the mental and motor functions which has yet been made. His objects were to determine both qualitatively and quantitatively the effects of caffein on a wide range of mental and motor processes, including their modifications by such factors as age, sex, weight, idiosyncrasy, dosage, previous caffein habits of the subjects, time and conditions of administration, and a number of other points connected therewith, including its effect on the general health.

For the purpose of conducting these experiments, a laboratory was specially fitted for the purpose, and provided with an elaborate outfit of apparatus and facilities needed for the purpose. Sixteen subjects, ten men and six women, were engaged for a period of forty days. During this time their habits and manner of living in every respect were carefully guarded, and they were required to attend the laboratory daily, and submit themselves to all the required series of mental and motor tests. Every precaution was observed to avoid all sources of inaccuracy. For a part of the days and to a part of the subjects, sugar of milk was administered instead of caffein, usually in capsules so that the difference could not be distinguished by the subject, and always at times known only to the responsible director.

The mental tests were so arranged as to register the effects of caffein on the functions of perception, association, discrimination, attention, and judgment; while the motor tests had reference to steadiness, speed and co-ordination.

The Steadiness Test. To determine the effect of caffein upon the steadiness with which a person could hold the outstretched arm, the following apparatus was made use of: A metal rod 2.5 mm. in diameter was held in a hole formed in a brass plate. At first the diameter of the hole was 6 mm., but later this was reduced to 4.5 mm. Every contact of the rod with the sides of the hole was registered by an automatic electric counter. The test consisted in standing unsupported, and holding the rod in the hole for one minute with as few contacts as possible. The general results of this series of experiments were unsatisfactory, more so than in any other series recorded. In small doses no appreciable effect was observed. In moderate and large doses it seemed to increase the unsteadiness.

The Tapping Test. The test for speed was made with the metal rod described in the previous test, which was held in the right hand while the subject executed as rapidly as possible 400 taps on a solidly planted metal base. Each tap was recorded by the electric counter, and the time required for the first 200 and the last 200 taps was measured in fifths of a second by a stop watch.

The result showed the effect of caffein on a motor process such as that involved in this experiment to be that of stimulation, sometimes preceded by a slight initial retardation, which varies directly with the size of the dose. The effect begins in from 45 to 90 minutes after the dose is taken, the time being shorter for large doses, and longer for small ones and when the dose is taken with food. It persists from one to two hours when the dose is from one to three grains, and as long as four and one-half hours when the dose is as much as six grains. As in the previous test, no secondary effects were noted.

The Three Hole Test, as it is technically called, is a test of the power of co-ordination, consisted in inserting the before-mentioned metal rod into each of three holes arranged in the form of an equilateral triangle and about 8 cm. apart, in an oaken plank tilted at an angle of 45 degrees. Contact with the bottom of the hole made an electrical connection which was recorded by the automatic counter. The test consisted in inserting the rod into each of the three holes successively as rapidly as possible, until this had been done 100 times.

The general result of this series of experiments was to show the effect of small amounts of caffein to be that of stimulation, while moderate doses produced little or no effect, and large doses produced retardation, which in the largest amounts was sometimes preceded by a slight initial stimulation. The magnitude of the caffein effect varied inversely with the body weight of the subject tested.

The Typewriting Test was employed to show the influence of caffein on both the speed and the quality of the performance. The result showed that the speed of typewriting is quickened by doses of from one to three grains, and retarded by doses of from four to six grains. The quality of the work done, as measured by the number of errors, is increased throughout the whole range of dosage from one to six grains. Nor

is the increased speed gained at the expense of additional errors, since increased speed and a lessened number of errors are simultaneously present.

The Color-Naming Test, which is the first of the strictly mental tests, is made use of for the purpose of measuring the speed with which the name of an idea can be brought to the consciousness upon the sight of an object, which in this case is a color. On a white cardboard background were pasted 100 colored squares of paper. Each one of ten different colors occurred ten times on the card, the squares being arranged in a chance order, and placed 1 cm. apart. The card was placed face downward on the table before the subject. At the word, the subject was instructed to turn over the card, and read the ten lines of colored squares through as quickly as possible, naming the colors in each case. The assistant held a similar card, and said "No" whenever an error was made, and this was corrected before going on.

The effect in this case was to show stimulation throughout the entire range of doses employed, and that in direct proportion to the size of the dose employed. The effect began in from two to two and a half hours after the capsule was taken, and continued for three or four hours afterwards. There was no evidence of any secondary effect.

The Naming Opposites Test was used to represent the association of ideas. On a cardboard which lay face downward before the subject, was written a list of fifty adjectives, in two parallel columns of 25 words each. The test lay in naming the word opposite in meaning to each of those given. Errors were to be corrected before going on. The result showed stimulation range of dosage employed, with in general the most marked stimulation from the smaller doses.

The Calculation Test. Here a card was prepared containing fifty two-place numbers from 20 to 80, all numbers ending in 0 being omitted. The numbers were placed in a random order, and no number was used more than once. The test consisted in adding mentally the number 17 to each of these numbers, as rapidly as possible. In case of an error, the subject was required to correct it before proceeding. The results showed a most pronounced stimulation following the use of caffein, whether in small, medium or large doses. So far from any secondary depression being evident, the work of the morning after shows, without exception, a clear improvement over the work of the preceding morning.

Discrimination and Choice Reaction. This test was made with the aid of the Columbia chronoscope and a somewhat complicated electrical apparatus, whereby the subject discriminated between the appearance of a red and a blue disc, and recorded the result by pressing as quickly as possible, with the forefinger of the left hand, when the color was red, and with the forefinger of the right hand when the color was blue, a telegraph key in circuit with an electric buzzer. Record was made of all false reactions. The result showed that small amounts of caffein tended to produce retardation in discrimination time, which retardation was also accompanied by a greater number of false reactions. Larger amounts of caffein produced within two hours after the dose were taken a stimulation sufficient to prevent the retardation following small doses. The caffein effect seemed very persistent in this test, traces of it being found on the following day.

The Cancellation Test made use of a printed sheet containing each of the digits from 0 to 9, repeated 100 times. The sheet contained 20 lines, and each figure occurred five times in each line. Aside from this regularity, the distribution represented a chance order. The work of the subject was to begin at the upper left hand corner and cross out with a pencil all the 2s, 3s, 5s, 6s or 8s. A different digit was used each time in the five daily trials. Some difficulty occurred in the handling of this test, on account of the varying acuteness of vision in the different subjects, and their susceptibility to eye strain. The general effect was stimulation for large doses, but small doses showed retardation on the average, while some subjects got retardation even in large amounts.

The Influence of Caffein on Sleep. This was tested in varying doses, and in different methods of ingestion, forms and general conditions. The result showed that small doses—1 to 4 grains—do not produce any appreciable disturbance of sleep, except in a few individual cases. But large doses—six grains—do cause marked impairment of sleep in the great majority of subjects, while a few individuals show complete resistance to its effects in this direction.

Its Influence on the General Health. The subjects quite uniformly report improvement in health, spirits and general efficiency at the close of the experiment. Two subjects reported a gain in weight, two a loss, and the rest either no change or are unable to state.

General Conclusions. Those which seem the most important are the following:

1. The general effect of caffein on the mental and motor processes is one of stimulation. Increased capacity for work is clearly demonstrated.

2. In all those tests involving motor speed and association, namely, the tapping test, color naming, naming opposites, and calculation, this was true in small, medium and large doses. Also, errors in typewriting were fewer for all doses.

3. In the tests of co-ordination, namely the three-hole test and speed in typewriting, while small doses produced stimulation, large ones caused retardation.

4. In the tests of choice, namely, discrimination and reaction time, and cancellation, the reverse was true, small doses producing retardation, and large ones stimulation.

5. The effect on the motor processes comes quickly and is transient. That on the higher mental processes comes more slowly and is more persistent.

6. In none of the experiments is there any trace of secondary depression or reaction effects.

7. Our previous knowledge of the physiological effects of caffein is not essentially changed by these experiments, but is rendered more definite and placed on a better foundation.

Bone Transplantation.

Murphy says the practical application of bone transplantation is to the following conditions:

To correct deformities resulting from defects of development, as aplasic extremital bones—radius, ulna, humerus, tibia, fibula, and femur, and congenital saddle-nose, aplasis mandible, etc.

To reproduce union in ununited fractures.

To replace bone removed by destructive infections, osteomyelitis, tuberculosis, lues, etc.

To restore or supplant fragments dislodged by fractures, as the head of the humerus, head of the femur, shaft of tibia.

To replace bone removed for non-malignant neoplasms, cysts, myeloma, osteitis fibrosa, etc.

To replace bone removed for encapsulated malignant disease, as giant-cell and chondral sarcoma, etc.

A CLINICAL LECTURE

IN

Long Island College Hospital, July 31, 1913.

HENRY H. MORTON, M. D.,

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES IN THE LONG ISLAND COLLEGE HOSPITAL, AND GENITO-URINARY SURGEON TO LONG ISLAND COLLEGE AND KINGS COUNTY HOSPITALS AND THE POLHEMUS MEMORIAL CLINIC, ETC.

Brooklyn, N. Y.

CASE I.

Azoospermia.

The most common cause of this condition is the bilateral obstruction of the vasa deferentia as the result of an old epididymitis. Gonorrhea is responsible for 90 per cent. of these cases and tubercular and syphilitic lesions will account for the remaining 10 per cent. As a result of the epididymitis, a heavy mass of scar tissue forms in the tail of the epididymis which contracts and by its pressure on the seminiferous tubes shuts them off. While a bilateral epididymitis is not always followed by sterility, in the majority of cases sterility occurs. Finger investigated 244 patients who had double epididymitis and found that 207 of them suffered from azoöspermia.

Until very recent years the condition of plugging of the vasa deferentia by epididymitis was a perfectly hopeless condition, except in cases where the growth was due to syphilis. In these cases vigorous antisyphilitic treatment would result in absorption of the growth, but in the cases of gonorrheal epididymitis, the infiltrate was so hard and dense that no absorption could take place. The practical conclusion to be drawn from this fact is that we should treat our cases of gonorrheal epididymitis with the utmost care and constantly try to prevent the formation of the heavy infiltrate which will result in sterility.

In 1901 Edward Martin of Philadelphia devised an operation which in many cases is successful in relieving the condition. He made an anastamosis between the vas and another part of the epididymis. He reasoned in this wise: "Here is the testicle and there is the epididymis with the vas deferens coming down; the obstruction is at the globus minor and spermatozoa cannot get by this hard knot; why not cut off the end of the vas deferens and implant it in the epididymis above the obstruction so that the spermatozoa may pass through the new channel."

He first tried it on some dogs satisfactorily and then on a man who was sterile from epididymitis on both sides. The case proved successful because a month after the operation the patient showed a spermatazoa in the ejaculated semen, which he had not had before. He operated on a number of cases successfully, although in some he failed, but I should say that there were 50 per cent. of successful results. In the earlier reports Martin reported 6 cases which were cured where the spermatozoa reappeared and three fertile marriages were the result after this operation.

In talking to a man who is sterile we can at least say that the operation is not difficult, that it is not dangerous to life and that it is one which if not successful will not leave him any worse than he was. Whereas before he was sterile on both sides, after the operation he has a 50 per cent. chance of regaining his power of fecundation.

The spermatazoa are not found immediately after the wound heals. It usually takes at least a month before they reappear in the secretion, probably because there is a certain amount of swelling and congestion of the vas deferens which prevent them from coming out, but after a while matters assume their natural condition, the swelling subsides and the spermatazoa reappear in the ejaculated secretion.

Operation: I make an incision through the skin of the scrotum, expose the testicle and bring it out from the wound. I find a hard knot in the tail of the epididymis with the vas deferens running away from it. I separate the vas from the rest of the cord and cut it through with scissors at an angle.

The next step consists in sounding the vas deferens with a piece of fine silk-worm gut in order to make sure that there is no stricture in the vas deferens. Having ascertained that there is no stricture, we next search out a place on the head of the epididymis or the testicle for the implantation of the vas. Having found a place on the epididymis an incision is made with a pair of fine scissors and some of the fluid which exudes from the cut surface of the epididymis is immediately placed under the microscope.

We wait a moment for the house surgeon to examine the fluid.

He reports the presence of living spermatazoa. We know that the incision we have just made in the head of the epididymis is the place where it is safe to make the implantation; which we do by splitting the vas deferens at one end and sewing it into the wound in the epididymis with three silk sutures. The split is for the purpose of keeping the end open and preventing it from closing during the healing process.

As this patient has a hard knot of infiltration in both epididymes, we operate on the other side in precisely the same way, with this exception. In our first incision into the head of the epididymis, microscopic examination of the fluid which exudes fails to show the presence of spermatozoa. We therefore make an opening with the scissors into the head of the testicle itself, the house surgeon examines the fluid and finds spermatozoa and we make accordingly the implantation at that point, using the same technique.

The period of convalescence is short. The patient will be in the hospital for four or five days and will then go home. We will keep track of him for a couple of months in order to note the time of reappearance of the spermatazoa and I have every reason to believe that in this case we will be successful in finding them in the course of a few weeks.

Questions by Auditors and Answers by Dr. Morton:

Q. Is there a good deal of swelling following the operation—after taking the sutures out?

A. We do not take the sutures out.

Q. Is not the swelling great from the trauma of the operation? Does the testicle swell up?

A. Not much. It is handled carefully and is kept wrapped in hot cloths as much as we can. There is not as much swelling about it than there is after a varicocele operation.

CASE II.

Venereal Warts—Circumcision.

The next case is a simple one, that of venereal warts, but it is interesting because it so often happens that these cases come into a doctor's office and they are interesting from a diagnostic point of view. A man discovers the warts underneath the prepuce and thinks he has a chancre or chancroid and suffers a great deal of distress until he finds out what they really are.

The patient is being anesthetized prior to bringing him in.

Operation: You see a collection of vegetations. These are sometimes incorrectly referred to as condylomata. The correct name is papillomata or venereal

vegetations. They consist of small verrucous growths growing from the papillary layer of the skin underneath. The growths are favored by the thinness of the skin and by maceration. With a sharp curette I scrape off the vegetations very easily and freely. After the growths are all removed I sear the bleeding surfaces, lightly with the Paquelin cautery. In order to prevent a recurrence which will surely follow, unless the conditions predisposing to the growth are removed, I next perform circumcision according to our usual technique.

This consists in making an incision on the dorsum of the foreskin and trimming off the lateral flaps with the scissors. We now have the circumcision completed as far as the cutting is concerned, and the skin and mucous membrane are well approximated. The sutures are introduced in the following order: First, one is placed on the dorsum which anchors the parts; the next one is placed on the fraenum, then a couple are placed at the sides to approximate the skin and mucous membrane and the operation is completed.

I would like to say one word as to the dressing we use. It is almost impossible to keep a dry dressing on these cases and we find the best is a wet dressing of liq aluminii acetatis. The patient has a bowl of that beside his bed and changes the gauze from time to time, wets it with his aluminum acetate and in that way the dressing is always kept moist and is not soiled with urine. It is impossible to find a dressing that is not soiled with urine, and, of course, in that case the wound has a chance to become infected.

There is another point of importance in these cases and that is it is a mistake to circumcise a man in a doctor's office and let him walk home. We make a wound and while it is not a serious one, still it requires a certain amount of care to provide for proper healing of the wound. The patient should be kept in bed four or five days while the wound is healing and at the end of that time the swelling has gone down, the inflammation has subsided and it is safe for the patient to go about.

As far as complications and accidents of circumcision are concerned, in the hospital we sometimes see a case of circumcision done in the presence of chancroids where the whole circumcision wound becomes infected. A circumcision should never be done when chancroids are present, but if any cutting is to be done we should confine ourselves to a simple splitting up of the dorsum.

Another mistake which is apt to be made by the beginner in circumcising is to cut the skin too short. He takes hold of the skin and draws it down and as it is very elastic and stretches easily, if much tension is made the skin is drawn too far when the cut is made and the skin retracts and the surgeon is horrified to find a small strip of skin left behind and a large gaping area of mucous membrane. If such an accident does happen the only thing to do is to make a patch of the mucous membrane and allow the mucous membrane to take the place of the skin that ought to be there, and it is surprising to see how well those things come out. Usually, the skin and the mucous membrane will come together and while the covering will be a little short, still nature is very good to bungling surgeons and a great many of our mistakes are covered by the natural processes of repair.

Questions by Auditors and Answers by Dr. Morton.

Q. Do you recommend taking off as little as possible? That is, in speaking of the play between skin and mucous membrane that is provided for in the technic, is it good policy to expose too much?

A. I suppose there ought to be maybe one-quarter inch of skin and one-quarter inch of mucous membrane to allow for the proper play. My rule for getting the cut right, in proportion, is to make my dorsal slit right through the skin and mucous membrane up to where the skin joins the corona. That gives me a starting point to my lateral incisions and I can be sure I will not cut off too much or too little because I have a guide, this being the joining of the mucous membrane with the corona of the glans. Then I trim from that on either side.

Q. Do you recommend putting stitches in? Some men use the clamp.

A. It is a mistake to clamp. You get all sorts of disalignment of the tissues and of the mucous membrane. I introduce the stitches in this particular way: One stitch here at the top of the dorsum, the anchor; the next stitch at the fraenum and then a couple of lateral sutures.

CASE III.

Chancroidal Ulceration.—This man, a steward on board of a vessel, got chancroids underneath a long foreskin. There was no ship surgeon aboard and his foreskin swelled and became gangrenous and the end of his foreskin fell off—spontaneous circumcision it is called, by the natural process of strangulation and necrosis. Before that had taken place, however, a large part of the glans had been destroyed by the destructive action of the chancroid and had only about half of the glans.

This case is interesting as showing the unfortunate results taking place in chancroids where they cannot be reached to treat them properly and where there is too much tension underneath a long foreskin.

The treatment of this case at present will consist in hot applications—hot water. There is nothing like hot water or hot sitz baths and then iodoform applied to the chancroid and over all an aluminum acetate dressing. There is nothing better than aluminum acetate for all of these sloughing, nasty, septic wounds. I first learned of it when I worked as a student in Germany thirty years ago and I find that they are still using it in the German hospitals as they have found nothing to take the place of it.

CASE IV.

Syphilitic Testicle.—The next case is interesting from the standpoint of diagnosis particularly and also of treatment.

This man came here a few weeks ago with a large fistulous opening in his scrotum discharging pus. The left testicle was moderately enlarged. At first I supposed he had a stricture with extravasation of urine which had burst through the urethra, burrowed in through his scrotum and discharged outside through the skin, but on passing a sound into the urethra I found that it admitted a No. 30 sound, so the idea of stricture was excluded. The right testicle was quite normal. The left testicle was rather irregular in shape and very hard, and on putting a probe in through the fistulous opening I found that the probe went to a point in the scrotum, so that the fistulous tract communicates, not with the urethra, but goes ino the scrotum and communicates with the testicle.

The point which we have to consider in this particular case, having made a diagnosis of disease of the testicle with fistulous tract and discharge of pus is, is it tuberculous or syphilitic?

Examination per rectum shows no involvement of the prostate or seminal vesicles, and there are no nodules, which we almost always find in advanced cases of tuberculosis. The Wassermann reaction is positive.

of the vas deferens which prevent them from coming mata. The correct name is papillomata or venereal

We decided, then, that we had to do with a syphilitic testicle which had begun to break down and discharge, and the patient was accordingly given salvarsan. A few days after the salvarsan we gave him mercury by hypodermic injection. Improvement in the condition of the testicle was noticed; it grew smaller and softer and the discharge lessened and he has improved very much and the improvement has been steady and gradual and it has been facilitated by the administration of large doses of iodid of potash.

In all these conditions, whether in the arteries or testicle or internal organs,, in addition to salvarsan, we ought still to use iodid of potash in the old doses in which it was formerly found so successful. Sometimes we see patients treated outside by doctors and I say to them, "Has iodid been given?" And they say, "Yes, 10 or 15 grains three times a day, but the patient suffered so we had to stop it because of the eruption and coryza."

In the first place, 10 or 15 grains three times a day are absolutely of not the slightest use. To expect any result from iodid of potash it is necessary to give it in large doses and I am in the habit of giving a half ounce to an ounce a day and keeping it up for several weeks at a time and with this dosage it is perfectly marvelous to see how gummatous infiltrates will be absorbed and disappear like a snowbank before the April sun. As far as the tolerance to iodid of potash is concerned I have never yet seen a patient who needed it who was not able to tolerate it in sufficiently large doses. It is the small doses, 10 or 15 grains a day, that distress the patients. Small doses are eliminated by the nasal mucous membrane and irritate the organs as they pass out, whereas the large doses are eliminated by the kidneys and perhaps undergo some chemical change which prevents the bad effect produced by small doses; so that because a patient shows an intolerance to small doses it does not necessarily indicate and is no argument why he should not be able to tolerate the full ounce or half-ounce per diem doses of the drug when he really needs it.

Questions by Auditors and Answers by Dr. Morton.

Q. Would you give that amount in three doses?

A. Yes. It should never be given on a full stomach for the reason that the starch in the food absorbs the iodid and it is thereby rendered inert. The time to give it is two hours after eating when the stomach is empty, in seltzer or vichy or one or two tumblersful of hot or cold water so as to dilute the saturated solution; if that is done no trouble will be experienced. I wish that doctors generally were more familiar with the use of iodid of potash, it is such a wonderful drug in its effects and will accomplish such brilliant results if properly given.

CASE V.

A Case of Fistulous Opening in the left hypogastrium, opening up the space of Retzius and communicating with the bladder. I first showed this patient at the clinic on June 5th and bring him here again because if ever a man was dragged from the edge of the grave he is the one.

He was reported at the last clinical lecture, under the same title as above (MEDICAL TIMES, July, 1913, p. 200.)

He had been operated on for stricture by external urethrotomy in one of the other hospitals some months before he came to the Long Island College Hospital. About a week before my operation I found a large fistulous opening in his hypogastric region and I put my finger in and could sweep it around a big cavity, from which pus, blood and urine were pouring out. The opening communicated with the bladder and the patient was passing all his urine through the fistulous tract. The urethra was entirely occluded.

He was so thin that there was absolutely nothing left of him and the people here all said, "There is no use," but it seemed to me we could do a great deal for him. The first thing to do was to divert the pus and urine away from the fistulous tract, so I did a rapid perineal section under novocain local anesthesia and put a large perineal drain into the bladder, thus diverting the stream of urine from the fistulous tract. Just as soon as the urine commenced to flow through the perineum the patient began to improve. We placed him on the roof where he could get fresh air all day, put him on a stimulating diet, gave him milk, eggs, whiskey and strychnin. His appetite improved and he drank his whiskey and began to get more cheerful. He did very well for a few days and then had a violent hemorrhage from the abdominal fistula. The patient was almost exsanguinated. We stopped the bleeding by a tight packing but it took a week for him to recover from the effects of the hemorrhage. A week later he had another hemorrhage and almost died therefrom. But after the first operation we had time to call in the assistance of the laboratory for the aids in diagnosis which it could give us. Prof. Lintz made a blood count and got the usual findings of secondary anaemia, reduction in number and changes in form of the erythrocytes; reduction of hemaglobin and iow color index. The leucocytes were not affected.

While having recourse to the laboratory tests some one suggested the advisability of having a Wassermann taken, which was done, and, very much to my surprise, it was strongly positive. This gave us a line on diagnosis and treatment as well. Of course, we reasoned that the man has had syphilis and probably has an endarteritis. His tissues are below par and any wound will not heal in the presence of this profound anemia complicated with syphilis. Therefore, we decided to treat the syphilis. I accordingly gave him salvarsan about two and a half weeks ago. The effect was magical, perfectly marvelous! Three days after the salvarsan was given the color began to return to his face and he has been stronger ever since, has been continually improving and has had no more hemorrhages and the great cavity in his prevesical space is almost healed, so that there is only a small opening, admitting a probe to the depth of an inch and a half. It is wonderful the effect the salvarsan has had. We are going to give him another dose of salvarsan to-day and at the same time we will take the blood and have another Wassermann made as we draw the blood for the salvarsan injection.

This is certainly one of the most striking cases of the effects of salvarsan that I have ever seen and it is one of the cases which, as I have already said, was dragged from the edge of the grave and brought back to life, first, by the institution of continuous perineal drainage thus preventing the further septic absorption from the fistulous tract and secondly by the recognition of the syphilis by finding a positive Wassermann reaction by means of the laboratory methods, and thirdly by the application of the salvarsan therapy, which we never would have thought of using unless the laboratory had pointed out the necessity for so doing.

Questions by Auditors and Answers by Dr. Morton.

Q. According to that, salvarsan is the only thing that would have saved this man. Is there no other treatment which would have saved him?

A. The first thing of value was the diverting of the flow of urine from the fistulous tract and the draining of the bladder. That in itself was very helpful.

Q. But the salvarsan?

A. He had some degeneration in his arteries as the result of the syphilitic condition and he was having constantly recurring hemorrhages and although we drained his bladder and relieved his sepsis, we could not stop the hemorrhages. The salvarsan cleared up the arterial condition and healed the wound so that, first, drainage, and secondly, salvarsan pulled him through.

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INFANCY AND CHILDHOOD.

DAVID ALLYN GORTON, M. D.,
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The human infant at birth is the most fragile of all vertebrated animals. It is as tender as the tiniest flower; it is often as fragile as a snow-flake. It has the least instinct of all animals of its species, and it only reasons potentially. The young mammals of other vertebrates have instinct equal to their wants and the regulation of their habits. The mothers of other vertebrates have instinct equal to every exigency of the puerperal state, foreseeing the time of travail, and making provision for the needs of their young. It is not so with the human mother. She is supposed to have maternal instinct and to know naturally how to care for and rear her young, but it is an error. The human mother oftener has neither instinct nor intuition to guide her for such duties. It is necessary, therefore, that she should be educated in these things. Even mothers experienced in child bearing need scientific instruction to properly care for their infants, not only the first year of its age, but to the age of puberty. The ignorant, experienced mother is often so filled with antiquated and superstitious notions as to unfit her to care for her baby. I have known such mothers to give a little fresh urine to the new-born babe. The custom of masticating solid food for the infant of a few months old, by the mother, may still be observed in the back districts. The taut "belly band," and the tightly pinned band of the petticoat are still in vogue in sections less remote from cifilization, put on the infant by the motherly "instinct."

Nearly half the children of Christendom die before reaching the age of five years. It is strange that such a fact should not awaken more widespread public interest. It is a trite saying, that "the good die young." As a matter of fact, it is true as to infancy, but, how misleading it is. Death comes to many of these unfortunate waifs of inhumanity, mercifully, no doubt. But it would be just and wise on the part of a Divine Providence to damn a community, or State, that permitted such merciless and inhuman care of our young and defenseless progeny. The chief causes of this shocking mortality of infants, are ignorance and neglect.

Feeding of Infants.

The natural food of all young mammals is milk. The milk of the healthy human mother never disagrees with her infant. The nutrition that nature secures the human infant is as perfect in its adaptation to the wants of the baby as that which she provides for the young of the lower mammals. It is true that mother's milk frequently disagrees with her baby, being of poor quality, or other ways hurt by the mal-condition of the mother. The mother not infrequently loses her milk from some abnormal cause, and so-called artificial food must be substituted. In the preparation of such artificial food for infants, the chemists have been at work since the time of Liebig, half a century or more ago. His formula for the preparation of food for infants is still used, with certain modifications, in the form of Mellens' Food.

It is too much to affirm that the chemico-physiologists have ever succeeded in perfectly imitating mothers' milk. Nevertheless, they have succeeded in so modifying cows' milk as to make it digestible by the infant. The chief agency in this process is malt, with finely prepared cereals, wheat, barley, the albumen of eggs, etc., which is found to soften and otherwise change the casein of cows' milk so as to render it easily digestible in the stomach of the human infant.

These observations are intended to apply to the first six months of a child's existence, when it is presumed to have cut its first four incisors. It is hardly necessary to say, that no other food whatever, water excepted, is admissible for the infant at this period, and long after it in most cases. In this period the infant is most delicate, and needs to be guarded with greatest care against errors in feeding. The custom of giving the baby a taste of a little fruit jelly, a chicken bone to pick, or a rind of bacon to suck, is reprehensible. No mother with a proper regard for the comfort and well-being of her child will indulge a custom so pernicious.

As dentition goes forward and other teeth come, and the irritation of teething subsides, certain other simple things, as Graham and oat-meal crackers, the juicy fruits, as the apple, banana, pear, peach, the juice of sweet grapes, bread-and-butter, etc., will have their place in the child's dietary. The acid fruits should be avoided, and every form of animal food, except, of course, milk, which after seven months, may be given unmodified, in most instances. Crackers made of fine bolted wheat flour have no place in a child's diet.

It should be borne in mind that the stage of dentition is the natural guide to the infant's dietary. While I am persuaded that man is an omniverous animal by nature, I am equally persuaded that a frugiverous diet is best for him, that is, to perfect a sound mind in a sound body. If one would develop selfish, combative children, give them flesh food and give it early, or at the end of their second year. They will be likely to have their first complement of teeth at that age, and be able to masticate, and should have food to masticate. The fruits and the cereals, preferably, as I have stated take rank. Guard against excess of the carbon foods. It is an error to suppose that a fat child is properly nourished. The advertising booklets of food for infants give illustrations of children, rosy, fat, and beautiful. The illustrations may be true to life, but they are misleading in fact. In the nutrition of an infant, the aim should be harmonious development of body and mind, and the latter should be the leading consideration in the infant's second year, I mean as to nourishment, not of training. There are articles of food that minister more especially to mentality, others to the bony structure, still others to the cellular tissue, others to intellect. The last should be kept in mind in selecting an infant's dietary.

Hygiene of the Nursery.

The nursery is the baby's little world. Let it be all its own, and constitute an environment for the newly born of health and comfort. The apartment should be spacious, with ample means of ventilation and sunshine. Its floor should be bare of carpets and rugs. Let there be no draperies to gather and conceal death-dealing dust. The floor is the baby's playground. It

should be kept clean and sweet. No dust, soiled napkins, or unclean clothing, should be allowed to accumulate. In this apartment place a couch, thoroughly protected from dampness, where the baby can sleep, away from the noise of the street or the household. On its door let it be writ, "No smoking allowed here."

Nursing Aphorisms.

I. Be in no hurry to bathe the new-born infant. A few hours of rest after a tedious labor is as necessary for it as for the mother.

II. Unless there are special reasons for a belly-band, it should be omitted.

III. The baby should be put to the breast soon as the mother is prepared to receive it.

IV. Be in no hurry to feed the baby. It is not ready for food until the mother is prepared to furnish it. Meantime, give the child from time to time a little warm water slightly sweetened with honey.

V. If the mother's milk fails, and artificial food be substituted, look well after the nursing bottle and nipple. The nursing bottles should be aseptically cleansed with boiling water before each using; the nipple also, especially in warm weather.

VI. The baby should be bathed daily in warm soft water, to which a modicum of soap has been added. As it increases in strength, the bath should be more frequent and cold. Wet napkins should be removed promptly, and the child kept dry and sweet.

VII. The new-born infant is often as delicate as a flower; handle it carefully and as little as possible.

VIII. Be patient with the crying baby. It is unhappy or suffering, and may be ill.

IX. No healthy baby will cry, except from hunger or thirst; the need of being changed, or some concealed want.

X. Beware how you allow a baby to sleep in soiled or wet diapers to absorb urea, which is almost as poisonous as nicotine.

XI. Be regular as to intervals of feeding. The healthy baby, during its first few months, should be fed every three hours, from early morning until midnight. The weakling may need to be fed less at a time and every two hours, and sometimes oftener.

XII. Never give the baby its food cold. Confine the child to one article of food, until a change of diet is necessary. Give the baby as much food at one time as it will take; there is no danger from over-feeding; the child will promptly return any surplus it may have taken.

XIII. Should an infant seem to require food between the regular intervals of feeding, it is probably thirsty rather than hungry; give it warm water (sterilized) made palatable with sugar or honey.

XIV. No healthy baby after the age of seven months, needs to be fed oftener than four-hour intervals, and should not be fed at all between the hours of 7 a. m. and 11 p. m.

XV. If the infant be brought up on the bottle, the problem is one of nutrition. No child could become seriously ill, barring accidents and contagious diseases, that is well nourished; the nourished child digests its food.

XVI. Watch the dejections of the child that is brought up on modified milk. You will find in them how and when to change the proportion of the modifying element to the proportion of the milk.

XVII. The milk of the baby should be as fresh as possible. Milk is extremely sensitive to morbific causes and even harmless odors and gases and may be spoiled for the baby's use in the ice-box, from odors that are sweet and harmless in themselves. A foul ice-box is, therefore, not the only source of infection of milk.

XVIII. The colicky infant may usually be relieved by the free use of water as hot as can be prudently given, made palatable with honey, and administered by the nursing bottle. Relief by this means is to be preferred to the ministration of the customary soothing medicines. No child will have colic that digests its food.

XIX. Do not give an infant either laxative or astringent medicines. Nor should the baby be given anodynes of any kind, or for any purpose. There are wiser and more rational methods of meeting the indications for which they are prescribed. A drop of laudanum has been known to kill a young infant.

XX. Let no mother worry over dentition, nor fear the dangers of the "second summer." Look well to the digestion and nutrition of the baby; keep the alimentary tract unobstructed and free of ptomaines and other crudities, and there will be no danger of choleras, dysenteries and convulsions. The "second summer" would then be an improvement over the first.

XXI. Do not encourage precocity. Leave the infant, the first few months, almost entirely to nature, that is, to itself. The brainy child has everything to lose by over-attention; the brainless child, nothing to gain.

XXII. Dress the baby lightly in wool of soft light texture in cold weather; in warm weather it should be of linen or silk. Do not put on stockings and shoes nor afflict it with caps and bands and long swaddling clothes.

XXIII. Never load the baby down with wraps, nor cover it at any time with heavy, impervious blankets or quilts. An hour's sweating will neutralize a week's growth. Put the baby to bed in fresh, clean garments.

XXIV. Remember that the skin is a breathing organ, especially an infant's skin. During the first few weeks of its life, it breathes more by its skin than by its lungs. Do not asphyxiate the child with wealth of wraps nor poison it to death with retained wet diapers.

XXV. Constipation is the infant's peril. If the child be constipated, and its stools dry, and difficult to pass, or too large to pass easily, the warm water rectal douche should be given freely but judiciously. Should this procedure not afford prompt relief to the little sufferer, use sweet oil instead of water. Laxative medicine is too slow to act in such an emergency, and if given, would afford only temporary relief, and leave the child in worse condition than it was at first. The radical cure of such a condition should be sought in the baby's dietary.

In attaching so much importance to hygiene and dietetics in the care and treatment of infants and children, let no one conclude that we underrate the importance of medicaments in the treatment of certain abnormal conditions to which the infant, through bad heredity and a worse environment, falls a victim. Medicaments have a wide range of usefulness in pediatrics, of course, but it was foreign to our purpose to intrench upon that branch of our subject, since we have not written so much for the profession as for nurses and mothers, with the object of extending or enlarging the perspectives of their duties and responsibilities in the family and home. Hygiene and sanitation are complements of medicine, the science of which is entirely due to the unselfish labors of the medical profession.

Cows' milk cannot be used in treating diabetes or the succeeding nephritis.

THE FIELD HOSPITAL IN PEACE AND WAR*

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The field hospital of the army has never had a better opportunity of demonstrating its efficiency in time of peace than during the recent encampment of Union and Confederate veterans at Gettysburg. The veterans, more than 50,000 in number, were largely dependent upon the army field hospitals for their medical and surgical attention. There were two of these institutions at the encampment, Field Hospital, No. 1, stationed permanently at Fort D. A. Russell, Wyo., Major William W. Reno, M. C., U. S. Army, commanding and a provisional hospital commanded by Major L. T. Hess, M. C., U. S. Army. Of the 744 veterans admitted to the wards of the field and regimental hospitals, 575 were cared for in the field hospitals, which in addition treated but did not formally admit 1,715 men.

GENERAL VIEW OF FIRST FIELD HOSPITAL, MAJ. W. W. RENO, M. C., COMMANDING.

In presenting a brief resume of the work of Gettysburg field hospitals and of the history and purpose of the field hospital as a factor in the army in time of peace and war, F. H. No. 1 will be particularly in mind. It is known as the model organization of its kind and is commanded by one of the best known sanitarians, administrators and medical writers in the service.

When the Surgeon General planned the medical side of the encampment he ordered Field Hospital No. 1 and its entire personnel from Wyoming to Gettysburg, a tribute to the excellence of the outfit. The hospital tents and the stores were sent from Washington but the working material came from beyond the Rockies.

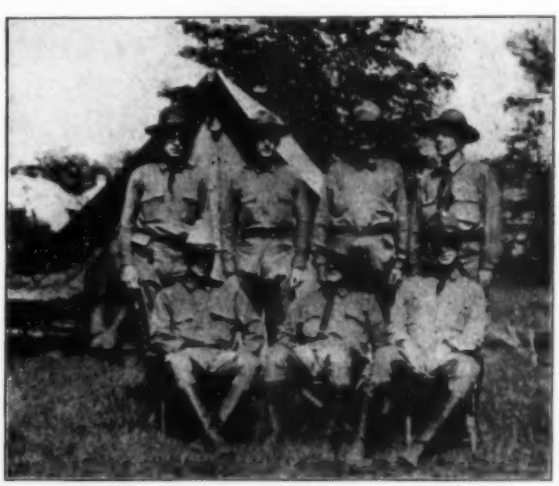
Major Reno, who has the rather unique distinction of commanding both a field hospital and an ambulance company, two distinct units, at Fort D. A. Russell, had as a medical staff: Capt. Harry S. Purnell, M. C., executive officer; Capt. Arthur N. Tasker, M. C., First Lieutenant James E. Baylis, M. C., First Lieutenant Alvin W. Schoenleber, M. C., First Lieutent Reynold Webb Wilcox, M. R. C., and First Lieutenant H. Sheridan Baketel, M. R. C., ward surgeons.

The hospital had six wards, each with a capacity of eighteen beds. In addition, pyramidal tents were raised giving the hospital a total capacity of 412 beds. The wards were divided into services as in a civil hospital. Major Reno in his work as chief administrative officer, was assisted by that most important official, the executive officer, or adjutant, in this instance Capt. Purnell. The professional work was divided among five officers. Capt. Tasker and Lieut. Wilcox were in charge of the three medical wards and Lieut. Baylis administered to the needs of the alcoholic ward, in addition to his duties as quartermaster and commissary. Lieut. Schoenleber officiated in the surgical ward and Lieut. Baketel in the urological ward. The officer of the day acted as admitting physician and assigned patients to the proper ward. Each of the five ward surgeons in rotation served his 24 hour tour of duty as officer of the day. Each ward had a member of the Hospital Corps as ward master and he was assisted by one or more male nurses. There were also two Red Cross nurses to each ward for day duty with three in the kitchen as dietitians.

In addition to seven officers the personnel of the F. H. No. 1 included 9 non-commissioned officers and 49 privates, 65 in all. Most of these men, regularly stationed at Fort D. A. Russell in Major Reno's command, were so perfectly drilled in the manifold duties of the Hospital Corps that the institution ran as smoothly as if it had been an old established civil hospital housed within walls of brick and stone.

The Field Hospital Outfit.

Despite the fact that the entire hospital and its equipment could be packed in such small compass as to be transported on eight army wagons, it had medical and surgical supplies equal to any 100 bed civil hospital. For instance, the operating room, a tent about 16 by 12 feet, contained an acetylene generator and lighting outfit, a sterilizer and a complete list of surgical instruments and accessories, so that any major operation could have been performed without the slightest difficulty. In the dispensary were chests containing the medical supplies. These included tablets and fluid extracts of almost everything in the pharmacopœia from



MEDICAL STAFF OF FIRST FIELD HOSPITAL.
Standing, Left to Right—Lieut. Baylis, M. C., Lieut. Schoenleber, M. C., Lieut. Wilcox, M. R. C., Lieut. Baketel, M. R. C.
Sitting—Capt. Purnell, M. C., Major Reno, M. C., Capt. Tasker, M. C.

* Approved for publication by the Surgeon-General.

spoiled for the baby's use in the ice-box, from odors succeeding nephritis.

DIET KITCHEN.

acetphenetidinum to zingiberis. These drugs were in standard sized tin containers, holding 3, 5, 12, 16 and 48 ounces, respectively. There was also a plentiful supply of antiseptics and disinfectants, hospital stores and such things as atomizers, crutches, eye shades, fracture boxes, mortars, litmus paper and trusses. Indeed, the dispensary rivaled in equipment a well stocked pharmacy. There was also a library of 25 standard textbooks, a microscope and complete outfit, a centrifuge and other instruments of precision.

The entire equipment weighed 20,988 pounds and was carried on 8 wagons. With mathematical precision the weight of each part of the outfit was determined; e. g., medicine, 433 lbs.; hospital stores, 1,107 lbs.; furniture and bedding, 4,554 lbs.; tents and tent equipment, 7,538 lbs.; instruments, 547 lbs.; surgical dressing, 622 lbs., etc. All the medical and surgical outfit was packed in iron bound chests of equal size with inside dimensions of 31 by 12 by 8 inches.

The exactness with which the problem of outfitting the field hospital has been worked out is marvelous. No essential was omitted; there was a place for everything and everything was in its place. If civilian hospital superintendents and nurses could take a course in an army hospital and profit thereby, attending physicians and surgeons would find their hospital pathways less thorny.

The bugbear of the army surgeon is the "paper work," the filing of many reports, which have to do with the work of the medical department. To carry out this duty in the field hospital, blanks are furnished which weigh 150 pounds. The "paper work" is in charge of the executive officer and is carried out under the supervision of a hospital sergeant, with two sergeants as clerks and stenographers. The office of F. H. No. 1 was a busy place during the encampment; six enlisted men clerks were on duty during the day and three at night. The history of every patient was taken, transcribed on a typewriter and is now in the archives of the War Department in Washington.

Field Hospital in Peace and War.

As the professional work of F. H. No. 1 is ably treated by Lieut. Reynold Webb Wilcox in another column, it may not be amiss to discuss the field hospital in general. Although these hospitals were used by Letterman and other surgeons in the Civil War, their use was not authorized until years after. By the act of Congress of March 2, 1903, the Secretary of War was "authorized to organize companies of instruction, ambulance companies and field hospitals as the necessities of the service may require." In 1911 the hospital, hitherto extemporized, became a permanent factor in the army. Its principal duty in time of peace is to teach recruits discipline and the duties of the Hospital Corps soldier. What it can do in time of emergency was seen in the Ohio floods last spring where the hospital offered succor to hundreds of sufferers and its officers brought order out of chaos.

The soldiers are given thorough instruction. The curriculum includes bearer drill, first aid, personal and camp hygiene, anatomy and physiology, diet cooking, nursing and bandaging, materia medica and pharmacy, care of animals and equitation and clerical and field work. The winter course comprises 34 weeks from November 1 to June 30 and the remainder of the time Hospital Corps soldiers are engaged in field work. When in the field the men live as nearly as possible under conditions of actual war.

During time of war the Hospital Corps is actively engaged caring for the wounded. The main function of the field hospital is to receive the seriously wounded sent back from the dressing stations in the rear of the firing line and care for them until they are able to be transported to evacuation or base hospitals or returned to duty. Consequently the field hospital is from 3 to 4 miles in the rear of the scene of conflict. It has a capacity of 108 beds and has five surgeons, one major in command, one captain, who is executive officer, quartermaster and commissary, and three captains and lieutenants as ward surgeons. An evacuation hospital, with 324 beds, has 14 medical officers, one lieutenant colonel in command, and thirteen captains and lieutenants. Of these one is executive officer, three are operating surgeons and eight are ward surgeons. A base hospital with 500 beds has 20 medical officers, a lieutenant colonel in command, one major and two captains operating surgeons, one captain as executive officer, one captain each as pathologist, eye, ear, nose and throat specialist and quartermaster and twelve ward surgeons.

The field hospital is the first place near the firing line where hospital treatment can be administered to the wounded, so that it is encumbent upon the surgeons to keep its wards as clear as possible to permit the admission of the other wounded from the battle. For

OPERATING ROOM, LIEUT. WILCOX, M. R. C., IN FOREGROUND.

this reason the medical officers must be skillful and ingenious, lest their wards become overcrowded. There must be frequent evacuations of wounded to evacuation and base hospitals.

The equipment of the field hospital in time of war is the same as in time of peace, with the exception of cots. The photographs illustrating the wards of F. H. No. 1, Gettysburg, show cots with mosquito bars. None is used in time of war. A rubber sheet is placed on the ground and thereon is laid a bed sack filled with straw, grass, hay or other material.

It will be observed that the field hospital is one of the most important factors in the care and disposition of the wounded, yet despite the anxiety of the War Department to have the army in a state of constant preparedness for war, there are only four field hospitals in the army. They are stationed at Fort D. A. Russell, Wyo., Texas City, Tex., Presidio of San Francisco and Manila. Doubtless much dependence would be made upon the field hospitals of the National Guard, many of which have attained considerable efficiency, but it would seem wise to have many more such units in the regular establishment.

Qualifications of the Medical Officer.

The army medical officer of to-day must be something more than a mere physician and surgeon. To be properly equipped for his duties in the field the military surgeon, in addition to his professional qualifications, should be a capable administrator, a commander and should possess a thorough knowledge of the work of the officer of the line. He must understand map reading, equitation, ballistics, trajectories and the various branches of military science, which will enable him in time of emergency to step into the place of the line officer. By knowing these things, in addition to being a natural commander, made it possible for Capt. Leonard Wood, assistant surgeon, U. S. Army, to become Major General Leonard Wood, chief of staff and virtual commander of the army of the United States.

To enable the medical officer to be thus properly equipped the War Department has established the Army Field Service School for Medical Officers at Fort Leavenworth, Kan., and there officers are being taught this important work. A correspondence school, giving practically the same course by mail, so far as it can be taught theoretically, is given those regular and militia officers who signify their desire of pursuing the studies.

Major Reno, who commanded F. H. No. 1 at Gettysburg, graduated from the Field Service School in June and in consequence the officers who were fortunate enough to be attached to his command were greatly benefitted by his wide knowledge of the art and science of warfare. After the veterans had departed, F. H. No. 1 was combined with the provisional hospital with Major Reno in command. With the evacuation of the camp, there were left only a few hundred regular troops and two hundred college students, who were being taught the elements of army life. The consequent relief from the enormous amount of work which the members of Major Reno's staff had assumed enabled him to give his officers systematic instruction in map reading and the other non-medical branches. The battlefield was minutely inspected on horseback and by means of maps and the official description of the conflict, a comprehensive idea of the battle, the disposition of troops, and especially the hospitals and medical corps, was obtained. By means of quizzes the salient features of the subjects were brought out and while the brevity of the course of study enabled the student officers to obtain only a bird's-eye view, Major Reno's instruction was so thorough that it greatly broadened the knowledge of the students, especially the four medical reserve officers, who were present.

In concluding this discussion of the encampment and its medical side, we wish to express appreciation for the many courtesies received at the hands of the regular medical officers. The officers of the Medical Reserve Corps who were present were unanimous in their praise of Lieut. Col. Alfred E. Bradley and his staff for their assistance and geniality.

In addition, the reserve officers attached to Field Hospital No. 1 are especially indebted to Major Reno and his staff. They were constantly on the alert for opportunities to assist the reserve officers in the duties of an officer. They taught them the "paper work," the complex requirements of the officer of the day and the work of inspection, as well as the little military amenities, so foreign to civil life, but so essential in the life

was not authorized until years after. By the act of admission of the other wounded from the battle. For

to the military officer. Major Reno is a most capable instructor and to him the reserve officers are personally indebted.

At this great encampment twenty-four officers of the Medical Reserve Corps, most of them with little or no previous military experience, assumed the duties of the regular medical officer. All of them were professionally qualified and in addition they were eager to learn all they could assimilate of military duty. Col. Bradley says they carried out their duties well and it must be said that each man was sincere and conscientious. They went to Gettysburg for work and they performed more in one week than they would have in one month in civil practice, but they were delighted with the experience and the spirit of camaraderie displayed by their colleagues of the regular establishment.

It is earnestly to be hoped that the experience with the officers of this corps at Gettysburg impressed the War Department so favorably that it will see its way clear to establish camps of instruction for Medical Reserve Corps officers in different parts of the country and thus make the most of the qualifications of the members of this potentially great organization.

MEDICAL IMPRESSIONS OF THE FIRST FIELD HOSPITAL AT THE RECENT VETERANS' ENCAMPMENT IN GETTYSBURG.*

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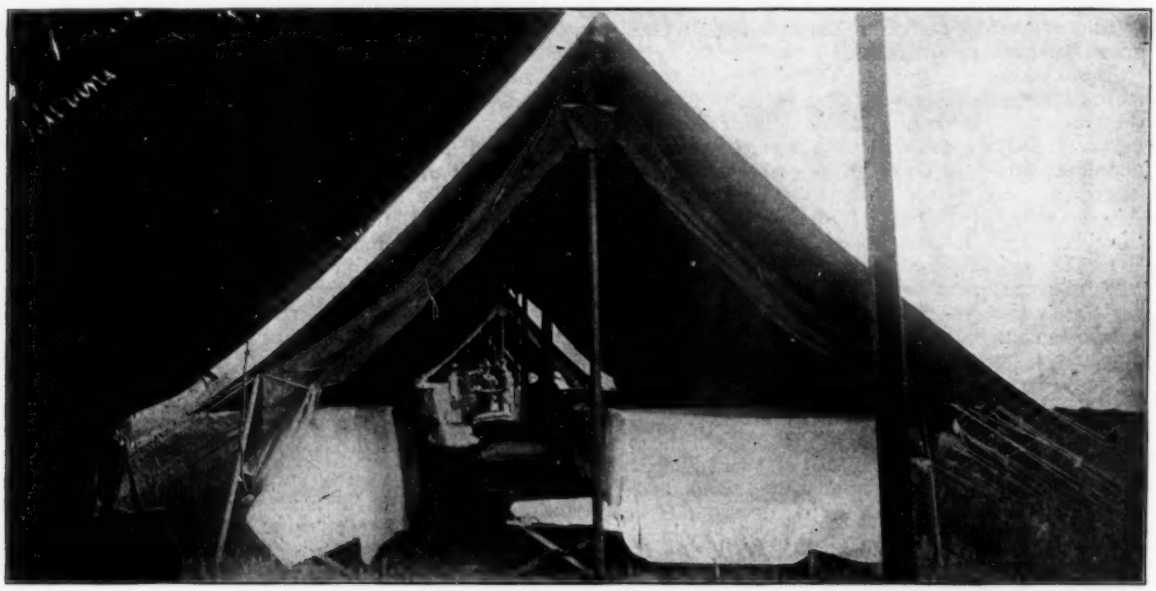
New York.

The popular impression seems to have been that the fifty odd thousand veterans at Gettysburg were immune again heat, alcohol, excitement and fatigue, and that to this was due the extremely small mortality. It is a fact, however, that the numerous first aid stations tendered prompt assistance to the veterans at the first sign of need and the remarkably efficient ambulance service, under Major M. A. W. Schockley, M. C., speedily brought those requiring hospital attention to the place where trained physicians gave immediate treatment. It was no unusual occurrence that two or more veterans, apparently moribund, were received, simultaneously at the First Field Hospital. That they did not die was due to the prompt and efficient treatment which they received.

Old soldiers, whose ages ranged from sixty-six years to the century mark, presented a large field for the scientific study of geriatrics. The only regret is that the press of patients and their immediate necessities prevented a more leisurely investigation and analysis of their pathological conditions. The most striking fact was the comparative rarity of the fibromyocarditic heart, the small heart so commonly associated with old age. On the other hand, excentric hypertrophy, especially in the wall of the left ventricle, was the rule and that independent of valvular lesion. Of these there was a great variety and in unusual grouping. For instance, pure aortic and mitral stenosis were often associated without an insufficiency at either orifice. Two instances of obstruction and regurgitation at both mitral and aortic orifices were found. In many instances murmurs due to stenosis, particularly at the aortic orifice, were so loud that they could be distinctly heard by the unaided ear at least one foot from the chest. No instance of Corrigan's pulse was found although many, but by no means the usual proportion, of instances of mitral insufficiency were encountered. Undoubtedly it was the predominance of stenosis and coexistence of hypertrophy of cardiac muscle that reduced the expected fatalities. Arerial degenerations, calcareous or fibrous were extremely frequent; also endarteritis proliferans was common. Yet in spite of these facts high blood pressure was rarely noticeable. Renal degenerations, particularly of the arterial (interstitial) variety, were common. A few instances of chronic parenchymatous nephritis were seen, although only one was imminently serious.



INTERIOR OF GENERAL MEDICAL WARD.

Of mental and nervous affections two instances of Parkinson's disease (paralysis agitans) were found. One man had cerebral hemorrhage on the train three hours before his arrival and entered the hospital with complete left hemiplegia of body, deviation of tongue to left, slight left facial hemiplegia, but without papil-

*Published with the permission of the Surgeon General, U. S. Army.

lary or ocular symptoms. The right patellar reflex was exaggerated. There was no change in symptoms nor signs during the five days he was under observation. Curiously enough at no time was his mentality impaired. Deafness, even of high degree, was very frequent.

The sluggish mentality of most veterans, the usual suspicions of old age, and their eagerness to tell the story of their past life and their ignoring of any questions bearing upon their present and more obvious disabilities made the work of the medical officer often vexatious and frequently nearly exhausted his patience. Three senile dements were encountered who were entirely oblivious to time, locality and environment, and nearly so as to identity.

Many instances of hypertrophied prostatic glands with the usual sequelæ were found, some aggravated by long continued use of filthy catheters, but owing to the skillful, patient and insistent attention of Lieut. H. S. Baketel, M. R. C., none of the medical patients were even in a dangerous condition from this cause.

Unusual conditions, diaphragmatic pleurisy, primary splenomegaly, duodenal ulcer, transverse myelitis and a scrotal hernia of fifty years duration containing omentum, as well as bowel, and the size of a man's head, were a few that were observed. Two epileptics, one of whom underwent three attacks in five hours, together with sundry instances of acute alcoholism kept one hospital unit somewhat disturbed. Although instances of heat exhaustion were numerous, but two patients were recorded as suffering from sunstroke.

In the treatment of the heat exhaustion, cardiac dilation from acute diarrhea and other causes, digitalis and its preparations act too slowly and the nitrites, on account of the physical conditions of the arteries, cannot aid, but strychnin often with alcohol, and even hypodermatically and in generous doses produced marvelous results. Many patients brought in pulseless, even with Hippocratic facies, responded to immediate and vigorous treatment, before removal from the admitting tent and after forty to seventy hours were able to walk from the hospital. To an officer of the Medical Reserve Corps, well acquainted with service in civil hospitals the resources of an established field hospital, such as the First, are admirable in completeness, portability and adaptability, while the team work of the Medical Corps under the efficient command of Major W. W. Reno, M. C., and the trained hospital corps produced results that were really marvelous. Although the pressure of work was fully equal to that expected in actual warfare and although naturally of a different character, at no time was the work delayed or the resources of the hospital embarrassed. The system, administered by trained officers of the Medical Corps and of the Hospital Corps working under their direction completely met all expectations.

679 Madison Ave.

Anesthesia of the Sciatic Nerve.—Babitzki (*Zentralbl. f. Chir.*, 1913, XL, 227) advocates intraneural injection for the successful anesthetization of this nerve. He uses Novocain in 2, 3 or 4% solution, and finds that if the technic is properly performed, the results are apparent within a very few minutes. He has employed this method of treatment in 15 cases with completely satisfactory results. He has also employed it for amputation of the femur, fractures of the femur, and inflammatory conditions of the bones of the feet. In these conditions, he has injected about 5 c.c. of a 3% Novocain solution by Laewen's method into the anterior crural nerve.

Current Orientation

UROLOGICAL CONDITIONS.

(*Concluded from p. 287*)

Contracture of Neck of Bladder.

The question of causes and action of contracture of the neck of the bladder is taken up by C. H. Chetwood of New York (January 25), who claims that such may exist as circular, sphincteric and prostatic stenoses with partial or complete urinary retention. It may occur in young or old, with or without prostatic enlargement, may be confined to the internal sphincter or encroach on the prostatic urethra, and is amenable to surgical relief. Some have seemed to doubt its existence, and there are reports in the literature of numerous cases of vesical atony attributed to arteriosclerosis, circulatory disturbances, senile changes, degeneration of bladder muscle, local nervous diseases and infection. He thinks a prolonged inflammation or congestion may have antedated some of these causes.

He reports a case in which the removal of the sphincteric orifice and prostatic urethra at autopsy showed the urethral outlet vigorously contracted, and histologic examination showed a pronounced inflammatory process as its basis. The reported cases of bladder atony, the causes of which are neither neurologic nor mechanical so far as ascertained, are, according to Chetwood's view, sometimes of specific origin, and he mentions a case in which specific treatment relieved the condition. The mystery surrounding some of the cases might possibly be cleared up if we had a better knowledge of the functional mechanism of the vesical prostatic outlet than we can gain by cystoscopic observation. A slight valvular abnormality might account for some while others may be due to some abnormality in the central nervous system. In the mechanical cases surgery is the only relief. His method is to use the galvanocautery through a small perineal cut of the vesical constriction on one or both sides, according to the case. He considers this very much better than any intravesical operation.

Prostatotomy.

C. M. Harpster, of Toledo, Ohio (January 25), advocates the use of the Goldschmidt method and instrument for cases of contraction of the bladder neck producing retention whether the prostate is large or not. His experience with the method has been uniformly good. He says the objection to it, that repeated cauterizations leave the prostatic portions of it scarred and battered, is not valid if the operation is done by careful operators. The contention that prostratectomy is sometimes required after cauterization is true if the operation is performed in unsuitable cases. After noticing other methods that had been proposed he remarks on the advance in endoscopic methods that has been made by the Nitze lens system, which shows a larger portion of the bladder than was formerly possible. Goldschmidt has used this lens system in the construction of his instrument which in its main principles is described by Harpster and the advantages of its application explained. It permits a full illumination of the field and, as L. E. Schmidt says, no other instrument gives the same information in regard to the posterior urethra and the internal urethral

orifice. It does not supplant prostatectomy, but Harpster trusts it may reduce the number of cases in which it is required.

Surgery of Prostatic Bars.

H. H. Young, of Baltimore (January 25), says that the subject of prostatic obstruction in the urethra, though the condition has been recognized by some surgeons who have devised measures to remedy it, has been generally neglected by the profession. In his own work he has attacked the condition, at first by a Bottini operation, then by means of a perineal prostatectomy, and still later by the suprapubic route. The first two methods were not satisfactory and a study of one of his cases operated on suprapubically called his attention to the fact that it should be possible to reach such cases by excision of the medium portion of the prostate through the urethra. He figures and describes an instrument devised by him for this purpose. "It consists of an outer tube about 18 cm. long with a coudé curve at its inner end and a urethroscopic disc at the other, containing a post on which an external urethoscopic light can be attached. Near the inner end of the under surface a large, deep fenestra is provided. Within the instrument is a second tube which has a sharp-cutting inner end made of steel, which when pushed home can excise anything appearing inside the outer tube. The object of this instrument is, when pushed through the urethra into the bladder, to engage the median bar in the fenestra and then to excise it by means of the inner cutting tube while observing the operation through the inner tube illumined with the external urethroscopic lamp." This is followed by continuous irrigation for from twenty-four to forty-eight hours through a two-way catheter and usually gives relief with rapid convalescence.

The operation has now been performed in over a hundred cases ,of which a detailed analysis is given. There has been no mortality and in the majority only local urethral anaesthesia has been employed. He claims that the results obtained, even in cases of complete retention of urine and catheter life, are entirely satisfactory for the cases in which he has employed it, viz.: small bars; contractures or lobules at the prostatic orifice and not associated with lateral hypertrophy; that for such cases the operation, when properly done, is thoroughly radical, does not have to be repeated, does not require subsequent urethral dilatation and gives lasting cures. For simple prostatic bars, contracture of the vesical orifice and those cases associated with calculus or diverticula, especially in the young or middle aged, the operation is, in his opinion, the safest, surest and most radical curative procedure yet offered.

Intermittent Pyuria.

A. J. Underhill, of Baltimore (April 5), reports two cases of intermittent pyuria diagnosed as due to infection of the prostatic utricle. In each case the posterior examination of the urethra through the endoscope showed the verumontanum swollen and edematous and pus could be washed out from the utricle. The condition was relieved by injections of 1 per cent. silver nitrate and in the second case the same, later replaced by quickly withdrawn injections of 1:1000 solution of liquor formaldehydi. The point of interest in the cases was the intermittent pyuria lasting a day or so and followed by a disappearance of all symptoms during the intervals until sufficient pus accumulated for the pressure to overcome the resistance offered by the adherent opening to the utricle. Another point of interest in the second case is the fact that ejaculatory ducts opened into the utricle, as spermatozoa appeared every time it was aspirated. It is surprising that the seminal vesicles and the epididymis were not also infected more severely than was the case.

Urethral Caruncle.

After reporting a case of large urethral caruncle in a girl aged 9 which had been attended with purulent discharge from the urethra, but no itching or discomfort on urination, and which was relieved by excision, C. B. Buford, of Chicago (April 26), discusses the subject which he finds far less commonly treated of in the current literature than its frequency and the discomfort it causes would warrant. In many cases the suffering is so great that the patients will undergo almost anything offering relief. The condition is usually mistaken for urethritis or cystitis and sometime for malignant disease. Pathologically, all caruncles are not of the same class; some may be new growths, but many are granulomas, as in the present case. The etiology remains unsettled and neither gonococcus infection nor the chemistry of the urine seems to be universal factors. The former infection seemed to have existed in the case reported. The only efficient treatment is excision, well outside and under the tumor and the closing of the wound so as to leave the least possible cicatrix and a wide external meatus so as to guard against stricture. "When the distal portion of the urethra is excised in a circular way it should not be allowed to retract; the skin of the vestibule should be drawn in and united to the urethra by horsehair sutures. When caruncles are not completely removed they recur. Instances are recorded of primary carcinoma occurring in the urethra or peri-urethral glands from which caruncles had been excised."

Urethrotomy.

After mentioning Young's method as to the best modern procedure for external urethrotomy and describing it, A. B. Cecil of Baltimore (May 24), says that it is not always possible with this procedure to follow exactly the thread-like tortuous urethral canal through its bed of scar tissue. He therefore describes a method used recently in a small series of cases in the John Hopkins Hospital. It consists in injecting into the urethra before operation a 1 :2,000 solution of methylene-blue with an ordinary urethral syringe. It should be made at first with little force but after moderate pressure more force should be employed. In all cases the penis should be elevated to facilitate the injection. "The urethra having been injected and the stain allowed to remain in for about five minutes, it should be washed out with sterile water. A sound is then passed through the anterior meatus as far as possible and an incision made directly down on it in the mid-line of the perineum. The urethra is then laid open and retracted by means of silk sutures. The further course of the canal is easily seen as a dark blue passage. A grooved director may then be passed along the course of the canal as indicated by the blue stain, and the incision continued along it, but it is often easier simply to follow the canal with a pair of scissors. The stain-

ing makes it easy to see false passages branching out from the true canal.

On account of the subsequent dilatation which must be carried out after the operation in any form of stricture, it is believed that it is well to close the false passages by removing the mucous membrane and uniting the tissues about them. Having laid out the course of the urethra the scar-tissue on each side is excised and the urethra thus rendered mobile. In a good many cases it will be found that the tortuous urethra, when freed and brought into the midline, will easily cover a large sound. This is due to the true shortening of the canal. A catheter is then passed into the bladder through the penis and the mucous membrane sutured about it. A small drain is next passed down to the urethra and the external wound closed with a few sutures." When the urethral canal has been obliterated and one or more fistulas are present, it has been the author's custom to inject both the anterior urethra and fistulas; both can then be traced and a new canal opened through the scar-tissue.

Impermeable Stricture.

J. B. Deaver, of Philadelphia (January 25), says that his experience has taught him that the membranous urethra is the seat of inflammatory stricture, though ordinarily it is the bulbous urethra that is involved in deep stricture. He reviews the methods of attacking impermeable stricture and condemns the blind perineal section. Incision exposing the urethra anterior to the stricture, which is the method most used, has the disadvantage that we are often unable to pass any instrument through the exposed strictured area and we have to either make a perineal dissection or carefully dissect backward to the dilated portion of the urethra until the stricture is laid open, and it has also the further drawback of misleading false passages. Cock's method is described in its originator's words, as he says it has been much misunderstood. The fourth method mentioned he call's Young's operation. It is incising the urethra through the tissue of the apex of the prostate after its exposure by the perineal method. Deaver says this has undoubted advantages, being carried out on definite and anatomic lines, and considers it the simplest procedure of all. The fifth method, including a primary or secondary suprapubic incision into the bladder as a preliminary to urethrotomy behind the stricture, is also condemned by him.

There are other methods, but he considers these five as the principal ones. As regards the treatment of the stricture area after it has been exposed, the older teaching was to drain and dilate. The more modern methods of excising the entire area and reuniting the severed urethra over a catheter or supplying the excised tissue from other parts, Deaver considers too time-consuming to be used in many cases. He sees no reason, however, against removing as much as possible of the dense organized scar tissue. It is a help to nature's reparative powers and he believes there is less tendency to new contracture than with mere incision and drainage. Another point emphasized is that a perineal drain should be left after a perineal operation. It is his plan, after establishing a passage way, having excised all the dense scar tissue and having placed a catheter inside the bladder closed over with what tissue he can find in layers, to always bring the catheter out of the urethra anterior to the point of stricture and fasten it to the anterior angle of the skin incision in the perineum. Whether another catheter is to be placed in the anterior penile urethra and brought out through the same wound is a matter for the judgment of the surgeon. He has had good results both with and without this addition.

Burnam's Test for Formaldehyd in the Urine.

B. F. Jenness, P. Asst. Surgeon, U. S. Navy (March 1), gives the results of experiments made with Burnam's test for formaldehyde in the urine. Burnam's test consists in a color reaction in the urine of persons who have taken hexamethylenamin. The technic is given by L'Esperance as follows: "To about 10 c.c. of suspected urine in a test-tube at body temperature is added: (1) of solution phenylhydrazin and hydrochloric acid (0.5 per cent.), three drops; (2) of solution sodium nitroprussid (5 per cent.), three drops; (3) of saturated solution sodium hydrate, a few drops poured along the side of the test-tube. As this latter solution diffuses throughout the urine in the tube, if formaldehyde is present (or the urine is positive), a deep purplish-black color is seen, quickly changing to dark green, gradually getting of a lighter shade of the same color, and finally pale yellow." When there is no formaldehyde in the urine a reddish color appears, changing to light yellow. The average time of appearance of the drug in the urine is about one hour after ingestion.

It continues from four to six hours with its maximum at two hours. Jenness followed the same technic on two groups of men, one hundred each. The first group were given 10 grains at 6 p. m. and a second dose at 6.30 the following morning, and the urines were examined at the end of five hours. The second group received 20 grains at 6.30 a. m. and the urines were examined at the end of two hours. The reaction in every case took place immediately, but varied slightly from those of L'Esperance. The deep purplish-black is not constant. In many the color was not a deep purplish-black, but purple changing to a green (not dark green), and finally to a pale yellow. A rather constant diagnostic point in the positive urines was the striking rapidity of the color formation and a peculiar method of diffusion through the upper strata of the fluid, going down in jet, as it were, from the top and diffusing in the lower strata. In the negative urines the test agreed in the main with those of L'Esperance, except that the end reaction was a greenish-yellow. In the first group of 100, 42 per cent. of the urines were positive and 53 per cent. were positive in the second group, the total percentage in the 200 together being 47.5 or 5 per cent. less than that reported L'Esperance.

Epididymotomy.

R. M. Culler, of Honolulu, H. I. (February 8), recommends the performance of epididymotomy in suitable cases as a rational procedure in epididymitis. Attention was first called to its value by Hagner of Washington, D. C., whose technic, however, as described seemed complicated. The author's more simple method is described as follows: "After preliminary preparation and anesthesia, incision three-fourths inch in length in integument is made over most prominent part of infiltrated mass, down to the dense fibrous covering of the epididymis. Puncture is made of the tunica vaginalis testis from the nearest wound angle with blunt needle or tenotome. The dense fibrous

covering over the major or minor body is then incised in the long axis of the tumor. This is accompanied by a marked lessening of resistance. The point of a slender hemostat is thrust into the mass with the idea of entering the pus focus. The blades of the forceps are slowly opened to effect a separation of tissue without undue tearing. The pus or fluid will escape at this stage if proper entry of the infected area is made. A one-inch length of No. 3 rubber tubing is inserted into the bottom of the wound and fixed with a suture. Copious dressing and snug application of a jumbo suspensory completes the procedure, which should consume about two minutes of time. Local anesthesia is inadvisable on account of the risk of sloughing." In all his sixteen cases pain was immediately relieved; defervescence occurred within forty-eight hours; the inflammatory mass was rapidly reduced; early healing occurred without suppuration and convalescence was without relapse. The danger of sterilization, Culler thinks, is less than that of the disease untreated, even in bilateral cases.

Acute Rheumatic Orchitis.

M. H. Bass, of New York (May 24), reports an unusual cure of orchitis of left testicle in a child 2½ years old, following an acute pharyngitis with enlargement of cervical lymphnodes left-sided rheumatic torticollis and erythema nodosum of the left leg and thigh. The pharyngitis and torticollis yielded to salicylates as did the orchitis also two weeks later, leaving no atrophy or other apparent sequelae. The association of orchitis with rheumatism has long been noticed but cases are rare, and this one was especially remarkable, occurring, as it did, in so young a subject. Each of the other complications of the case are also occasional manifestations of rheumatism, and Bass concludes that that is the most logical diagnosis in this case. The child after recovery gave a positive von Pirquet reaction but he does not consider that tuberculosis could have been an active factor in producing the combination. The parotid glands were unaffected throughout, thus excluding a testicular complication of mumps.

In connection with the study of genito-urinary diseases it is interesting to note that Long Island College Hospital and Johns Hopkins are erecting urological buildings, which will be devoted entirely to the study and treatment of medical and surgical affections of the genito-urinary tract, under the direction of Prof. Henry H. Morton and Prof. Hugh H. Young.

Epididymotomy.

Lauren S. Eckels, of the Army Medical Corps, thinks that epididymotomy should be the treatment of choice in all cases of epididymitis, whether caused by traumatism or by infection with either the gonococcus or other organism. Every case from the mildest to the most severe should be operated on as:

1. The relief from pain is instantaneous.
2. Internal administration of sedatives and opiates and loathsome external applications are unnecessary.
3. The abatement of fever takes place in from twenty-four to forty-eight hours.
4. Pus and abscess formation is prevented.
5. Swelling, tenderness and other symptoms rapidly disappear.
6. There is no tendency to relapse.
7. It insures a minimum of time lost from usual activities.
8. There is probably a smaller percentage of sterility following the disease.—(*J. A. M. A.*, August 16, 1913.)

American Association of Clinical Research.

The fifth annual meeting of this association will be held in Chicago, November 7 and 8. Every member who has paid his dues and who has a communication to make is urged to present a paper. The paper is accepted on the following conditions: That it has not been published before; that it becomes the property of the Association; that it shall not be published before its publication in the official journal; that it shall be in the hands of the secretary as soon as ready. Simultaneous publication may be arranged for, if desired, but no preferential publication in other than the journal in which the transactions officially appear.

The history of clinical research will be published for the sixth annual session in 1914. Any one in possession of any information relative to clinical research is requested to communcate it to the permanent secretary. The price will probably not exceed two dollars the volume.—James Krauss, Secretary.

Roentgen Therapy.

The importance of the massive measured dose of the X-ray is insisted on by S. Lange, Cincinnati, in preference to the small fractional doses. The full therapeutic action is brought about in the tissue only by their complete saturation; the fullest reaction is excited compatible with the integrity of the overlying or surrounding normal tissues. While finding its most brilliant application in the treatment of skin cancer, the massive measured dose method should be extended to every field of roentgentherapy. He has been using it in various forms of deep therapy with surprising results, using an aluminum filter varying in thickness from one to three mm. and the pastille is of course placed under the filter. This has increased the efficiency of post-operative treatment in malignant cases and hastened disappearance of recurrences. A number of conditions that have been relieved are specially mentioned, such as, myomas, climateric hemorrhages, enlarged thymus, etc. It would seem, he says, that the ability to use this method is essential for successful results. The problem of how many units to give is largely dependent on individual judgment. It must be remembered that the biologic or active dose is the physical or "crude" dose multiplied by the coefficient of susceptibility of the tissues under treatment. The possible dangers must not be overlooked, but they are limited by the use of the filter, the danger limit varying as Iselin has shown in the different regions of the body.—(*J. A. M. A.*, August 23.)

Medical Practice Wisdom.

A correspondent prints upon his bill head some sage advice, which is reproduced for the benefit of others: A receipted bill is an evidence of honesty. A prompt settlement of this bill is requested. If you pay your physician promptly, he will attend you promptly, day or night, rain or shine, while your slow neighbor suffers and waits, as he makes the doctor wait—and while he is waiting the angels gather him in.

Obstetrical cases, cash or security, where parties are not known. We reason this way: You have nine months for preparation, and if you are not ready then, there is no telling when you will be ready.

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The American College of Physicians.

THE MEDICAL TIMES would like to know what there is to prevent the organization of a medical society along lines similar to the American College of Surgeons? Decent men now have to adopt means of acquiring prestige with the public which, while "within the [ethical] law," are more undignified than frank labeling would be. There should be a medical organization similar to the surgical, with unmistakable hall marks of membership, steps being taken to impress its significance upon the public. The conditions of entrance to be about the same, certain applicants to be admitted without examination whose professional fitness has been established by membership in the government services, by distinguished achievements and by eminent appointments. A few other criteria of fitness would be laid down. All others would have to submit to hard tests.

Why not?

Of Diaphanous Skirts and Cognate Matters.

Most of our moral mentors are greatly perturbed because of prevailing styles of dressing and dancing. Writers in the London and New York *Times* are issuing fell warnings and emitting lugubrious prophecies. From severe clergymen like the Canon of St. Paul's emanate solemn anathemas. The unwonted activities of "middle-class" women whom plebeian standards and traditions identify only with the church, the home, the kitchen and the shop are resented by their erstwhile shepherds.

Of "the new freedom" in such matters and the great length to which it has gone all men are witnesses. Many women appear to be "drunk with their own sense of freedom." And we are not saying anything about its alcoholic auxiliaries.

As to the significance of the far-flung pendulum observers may differ. The common interpretation finds indecency for indecency's sake to be the motive force and reads decadence and degeneration into the verdict. But perhaps more properly interpreted these signs of the times indicate merely riotous self-expression incidental to the inevitable discarding of our peculiar, occidental forms of the face veil and confined feet. Turmoil and disorder are preceding reaction, precipitation of our agitated social elements and the women's ultimate "finding" of themselves.

The age and the phenomena aforesaid are transitional, and the more essentially conservative of the two sexes will surely become properly balanced after its "spree." And what wonder that the sex should now be somewhat on the rampage, after so many ages of Philistian repression? Naturally, the forms of riotous self-expression temporarily selected by women are those most available—dressing and dancing. How, after the centuries of slavery, dolldom and hausfrauism, can we expect to see the major portion of the sex suddenly expressing itself in art, science, letters, politics, the professions, or in commerce? How, indeed, can we even expect to see proper self-expression in those fields which, next to motherhood, are peculiarly women's own? It is commonly said that woman has made good in the work of social service, but the truth is that her real efficiency in that limitless field is yet to be revealed.

The significance, then, of certain suggestive styles of dressing and modes of dancing appears to be that woman, at the same time that she is reaching a plane whereon her old sexual, indirect weapons will be relatively unneeded, is whimsically exaggerating and glorifying for the nonce that which has served her so well through all the ages. There is almost a logical fitness in such an apotheosis. It is a saturnalia presided over by the shades of Cleopatra and Phryne; an Eleusinian mystery or pageant invoked by woman by way of signalizing a passing epoch in her ever upward evolution.

We need not worry too grievously about the final outcome of militantism or the dressing and dancing orgies. What concerns us as medical men just at present is the injurious influence of the erotic phases of these orgies on our young men. Yet we confess that we cannot see how such an influence can be obviated or even met. The social readjustment is not going to stop because of the demoralization of our youth. Nothing can now stop or even hold in check the feminist movement in any of its protean phases, and it is idle for prelates and the press to storm against it or any of its manifestations, though, undoubtedly, because of considerations of moral duty, they will continue to do so. We shall have to find consolation in the view that the wilder the excesses the sooner and speedier the sure reaction and final calm, with human society upon a higher, not lower, level. Human wreckage there will be a-plenty, and we shall be merely fortunate who will number no near and dear ones among the maimed.

Broadway Acquitted.

Brill (*Journal A. M. A.*, August 2) states that most of the sexual inverts he knows belong to our highest types both mentally and physically. Homosexuality, he says, is not only not confined to defectives, as commonly supposed, but is no sign of mental or physical degeneration.

It has long been our impression that it is not to the vulgar, naive and naked crowd that one encounters in New York's dance halls, cabarets and so-called dives

that one should look for sexual psychopathies. Among such crowds it is easy for medical men to distinguish the physically degenerate and the mentally feeble and undeveloped, but people so childish as regularly to find amusement in cabaret shows cannot possibly be sexually vicious. Indeed to such a class the practices of a Harry Thaw or an Oscar Wilde are wholly incomprehensible, mystic, recondite, outré. They are sexually ingenuous and psychologically normal, all their erotic ideas revolving about the sexual functions as conventionally performed. Even among the vulgarest class of theatre girls the alleged sexual peculiarities of their male and female associates are matters of whispered gossip, with more of malice than of truth in the vile aspersion. It is the intellectuals who are furnishing to-day most of the material for such foreign investigators as Bloch and Hirschfeld. If there were similar material in this country, and as much, we also would have our Blochs and Hirschfelds. Such high-browed psychopathic gentry as we have are not denizens of Broadway. The worst that can be said of that famous thoroughfare and its tenderloin zone is that it resembles nothing so much as a vast backyard at midnight in the season said to be sacred in feline biologic tradition. The activities of such a municipal backyard have little or nothing to do with psychopathia sexualis. We declare Broadway innocent, simple, vulgar, but not vicious.

Odd Phases of Eugenics.

With the general program of those idealists and practical men of science as well who are attempting to speed the day when pride of inheritance will concern itself with good physique and mental power not less than with pedigrees of the common genealogical sort we are in what might be called academic sympathy, but we may well speculate as to certain silly phases of the prospective program not contemplated by its promoters and not legitimately a part of it but which will surely find many manifestations.

When the general public begins to see a eugenic light, so to say, and begins to realize its racial responsibilities, it will begin to set itself ideals of what it considers the highest order. Among these ideals will be moral ones, as well as mental and physical. We have thought that the genus Puritan of the early Colonial period was to have no successor, but we may well feel terror at the eugenic prospect in this respect. The Puritan of old will have had nothing on the Puritan of to-morrow. The doctrine of prenatal influence, which the doctors have scoffed at so much, is destined to undergo an implification. Will the profession take yet another lesson at the hands of the laity and reshape its views once again, or will it stand as firmly by old dogmas as does Mother Rome herself?

Pathos and humor will be blended in the efforts that shall be witnessed looking to the evolution of supermen out of the loins of ambitious parents obsessed by eugenic ideals. The feeders and exercisers and physical culture charlatans and apostles of freak soul building will take a new lease of life and wax mightier in influence than of yore. New phases of pathologic egotism are in process of formulation; new paragons of morality, intellect and physique are impending; new snobberies are undoubtedly in store for society.

And suppose we did evolve a race of perfectly moral and healthy and intellectual supermen—what then? Would these racial "improvements" be permanent? Would the economic justice which would presumably accompany this evolution, with its elimination of bad environmental factors, make wholly for sustained racial excellence? Would there be any occasion for thundering Carlyles and reforming Ruskins and inspired priests when men were become white-robed demigods? Would the principles of Epictetus any longer apply to municipal administration? Would medical science decay when there were no problems to inspire the efforts of another Pasteur? Would the men of the future, smugly moral and disgustingly healthy, be bores or angelic companions? Would a Charles Lamb or a beloved Stevenson be possible in such a society? Would our real and fascinating devils be only the mythical heroes of small boys in the classic literature of the social millenium?

Probably life will never be so worth living as it is to-day. Our problems and our trials are what make it so. For ourselves, we have no wish to invoke the wizardry that would take us out of this century and set us forward into the heralded day of relative perfection, if such a day is ever to be.

What To Do With Our Old Warships.

There are about a million children in this country who are either tuberculous or in a fair way to become so. There are a score or more of vessels useless for purposes of war awaiting the target range or the auction block and the junk pile; some of them are destined to rust away in navy yards nominally as units in reserve fleets. The fourth International Congress on School Hygiene, on August 29, at Buffalo, unanimously adopted the following resolution, offered by Dr. S. Adolphus Knopf, in respect to these matters:

That the fourth International Congress on School Hygiene petitions the United States Government to place at the disposal of the various States of the Union as many of the discarded battleships and cruisers as possible, to be anchored according to their size in rivers, or at the seashore, and to be utilized by the respective communities for open-air schools, sanatorium schools for children, or hospital sanatoria for adults.

That the Congress expresses its appreciation to the Italian Government for the example it has given by consecrating three of its discarded men-of-war to the combat of tuberculosis.

That this Congress expresses the sincere wish that other Governments may follow the example of Italy.

That copies of these resolutions be presented to the American and other Governments represented at this Congress.

It remains to be seen what attitude our Navy Department will take toward this sensible and praiseworthy project. It is customary for the department to lend vessels for various purposes to the States, as for example those used by the naval militia. The New York Board of Education uses the gunboat Newport. There would appear to be no weighty reason why such vessels as the U. S. S. Minneapolis, now "laid up in ordinary" at Philadelphia, could not be employed as sanatoria. She is a large cruiser which has not been to sea for about fifteen years. Problems of ventilation would be quite simple in the case of such vessels. Battleships would be better than cruisers for use merely as open-air schools, all school work being done on deck, since they are not so roomy inside as cruisers, and not so easy to ventilate in the manner necessary where permanent patients are concerned. Deck teaching is the rule now on the small boats used by the Department of Health. Thus it is ventilation more than lighting, that would constitute a problem in the case of battleships, should they be used as sanatoria. In short, the cruisers would be better adaptable for sanatorium purposes and the battleships for open-air schools.

We would suggest that two cruisers, one to be used as a sanatorium, the other as a preventorium, be procured for New York, to be anchored off Staten Isl-

and. Smaller vessels should be obtained for ferriage and excursion purposes. In this way our facilities for the care of tuberculous and pre-tuberculous children would be extended without any great initial cost, as in the case of our usual projects, involving the purchase of expensive sites and the building of large plants. And there would be unenlightened local opposition to overcome. Surely the operating expenses could be borne by the authorities, in view of the manifest financial advantages set forth.

What a lark for a sick kiddie to go to a man-of-war instead of a hospital! Would he not feel like a regular pirate? Such a psychic element would be of no inconsiderable importance.

Hospital Superintendency as a Specialty.

There are few fields of endeavor in which the demand exceeds the supply. This is surely not the condition in the medical profession, but in one of its special branches it appears to be the case. There are not enough trained hospital superintendents to fill the vacancies. We have called the attention of our readers before to the necessity for more qualified hospital men.

We believe there are many physicians now in practice, possessing executive ability of a high order, who, with the proper amount of practical instruction, could develop into excellent administrators.

The average large hospital demands a medical superintendent. There cannot be a proper conception of all that goes to make up the practice of medicine on the part of the layman; no matter how sympathetic to the one must have the medical training. To have proper cooperation between staff and superintendent, the latter official *must* be a medical man.

Hospitals are asking for trained executives. Why do not our medical schools recognize that demand and gives courses in hospital administration to graduates of medical schools? As hospitals increase in efficiency, they must be kept up to the highest standard of efficiency by the executive head of the institution and it is eminently assential that the chief administrator be a medical man of talent, particularly fitted by educational and business attainments for the responsible position he is called upon to fill.

Hospital superintendency offers a splendid field to the business-like physician.

Operating Room Ventilation.

A writer in the *Hospital Record* does a service by calling attention to the poor ventilation in the average operating room. This fault seems to be very prevalent in most institutions. In the endeavor to keep the room sufficiently warm for the patient's comfort and to prevent the ingress of pathogenic bacteria the operating room is heated and sealed up, quickly diminishing the available supply of oxygen. The writer recently operated in a hospital where the ventilation was so wretched that it is no strange occurrence to have nurses faint. The surgeon upon completion of his duties in that room is quite exhausted. It is folly to watch out so carefully for perfect disinfection and overlook the very important necessity of furnishing patient, surgeons and nurses with a sufficiency of oxygen.

In nephrectomy for tuberculosis, after cutting through the ureter with a cautery, apply a clamp as near the bladder as possible and inject carbolic acid through a catheter introduced into the ureter, permitting the excess to escape.

Medical Editorial Table

Active Immunization Against Diphtheria.

There is no phase of immunity of greater practical importance than the active immunization against infectious disease. The curative serums constitute merely therapeutic agents. Prophylaxis is the ideal. Jenner's vaccination against smallpox remains the classical example of active immunization. It first showed the way, Pasteur's labors also furnished a clue, while the recent researches of Wright opened up a vista of great possibilities in the prevention as well as the cure of infections. It has been found that a horse which once served for the production of antotoxine failed to react to the maximum amount of diphtheria toxine that it had received during its last immunization sixteen years after such immunization. Indeed its serum was found to contain about four times as many units of antitoxine as it had yielded during the first immunization sixteen years before. The same phenomenon has been noted in dogs and in human subjects. We now know that for purposes of immunization the doses of toxine need not be at all large; in fact, a dose too small to cause the slightest reaction may be sufficient to induce a permanent immunity. This explains the comparative immunity of nurses and physicians to infection, due to their repeated absorption of small doses of toxine. May we not look forward to a time when active immunization will be accomplished by the introduction of small amounts of toxines, a procedure which would be perfectly harmless to the individual and yet effective in the production of lasting immunity.—(*New York Medical Journal,* August 25, 1913.)

The Therapeutic Range of Salvarsan.

Salvarsan has proved to be curative in other diseases than syphilis, and the full range of its usefulness has not yet been determined. There is evidently increasing interest in what salvarsan and neosalvarsan may do in diseases other than those in which it has already proved its value. Their possibilities are great outside of syphilis, since salvarsan has acted as a complete *therapia magna sterilisans* in recurrent fever and in frambesia or yaws. In view of what actually is accomplished in the way of rapid and complete sterilization in these human infections there is no room for doubt and distrust of the possibilities of Ehrlich's method. Vincent's angina and other lesions due to oral spirochetes, Aleppo boil and other diseases caused by organisms of the Leishmania group, amebic dysentery, scarlet fever, smallpox and glanders, yield to or are favorably influenced by salvarsan.—(*Journal A. M. A.,* August 30, 1913.)

The Prevention of Shock.

Nitrous oxide and oxygen obliterate psychic shock and produce no toxic shock, like chloroform and ether. Local anesthesia, used in conjunction with this type of anesthetic, obliterates traumatic shock. Many surgeons do not realize how toxic general anesthesia and rough handling of the wound invite shock, raise mortality and contribute to complications, discomforts and longer periods of disability. Local anesthesia, after the manner of Crile, blocks sensory afferent nerve impulses, so that the brain is temporarily disconnected from the wound. Owing to the fact that under nitrous oxide and oxygen anesthesia painful manipulations excite reflexes, one is enabled to tell whether the local infiltration is working effectively in respect to brain

blockage. Its other advantage is that it is non-toxic. The best index to the patient's condition before, during and after operation is the behavior of the blood-pressure. During a successful operation under local anesthesia, with or without nitrous oxide and oxygen, the blood-pressure remains more or less uniform. A sudden rise indicates painful manipulations; a fall, when these are continued, means shock. When earlier in the operation painful manipulations are followed by a fall of the blood-pressure, the surgeon knows that his patient is in poor condition to withstand further traumatic shock.—(*International Journal of Surgery,* July, 1913.)

Fetal Membranes for Skin Grafting.

An ingenious method of skin grafting, introduced almost simultaneously by Maximillian Stern and Nicholas Sabella, consists in the use of the amniotic layer of the fetal membranes. Derived from the ectoderm, the amnion is composed of embryonic dermal elements, and its employment for skin grafting seems logical. If the membrane is to be used within a short time, it is carefully washed free of blood and vaginal secretions, with normal saline solution, and bottled in that solution until needed. If the membrane is to be kept on hand for several weeks Stern dries it with sterile gauze, after washing, and stores it in Carrel's petrolatum preservative mixture. The glistening, inner surface of the amnion is applied to the wound, which is prepared the same as for Thiersch grafts. Stern covers the grafts with a coating of beeswax, castor oil and paraffin, applied with a brush; Sabella applies fenestrated oiled silk and over this a gauze dressing wet with in "decinormal salt solution or Carrel's solution." Each of the authors report pleasing results. If the grafting of amnion on a granulating wound is as effectual as the Thiersch graft it will surely replace the older method, for its advantages are quite obvious.—(*American Journal of Surgery,* August, 1913.)

Physicians and Population.

The total number of physicians in Europe is 160,000. Of these England has 7 to every 10,000 inhabitants, Germany, France and Italy about 5, Brussels shows 24 to every 10,000, in contrast to Amsterdam which has only two in an equal number of inhabitants. The situation in Europe is apparently less acute than in America. In Boston the estimated relation of physicians to patients is 1 to every 392 inhabitants, or slightly over 25 to every 10,000. It is evident that there are more physicians than are necessary to protect the health of the people. The aim should constantly be in medicine to eliminate the unfit, a process which goes on partly by natural means and partly by general raising of standards. If, in the future, prophylaxis is to take the place of individual treatment, we may well look forward to a complete readjustment of the medical situation, possibly on socialistic lines. In the meantime, whatever the future may have in store for us, there is no menace in the number of physicians. In this, as in other social and economic situations, the law of supply and demand will doubtless solve the problem.—(*Boston Medical and Surgical Journal,* July 31, 1913.)

The Alleged Toxicity of Antimeningitis Serum.

Of late, considerable prominence has been given by the medical press to the reports of a number of cases of death following the injection of antimeningitis serum into the subdural space, in the treatment of cerebrospinal meningitis. It has even been suggested that death in these cases has been due to a toxic effect of the serum upon the respiratory center after entrance into the fourth ventricle, inducing respiratory paralysis. But where death has occurred in these circumstances it is probably due to variation in intracranial pressure following the withdrawal of the spinal fluid and the introduction of the serum. It is also reasonable to assume that sudden death in virulent cases might come coincidentally with the injection of the serum, for which the latter would be blamed. Nevertheless in the use of this valuable remedy the greatest nicety of observation and judgment in its administration are imposed.—(*New York State Journal of Medicine,* August, 1913.)

Poliomyelitis and Its Periodicity.

Poliomyelitis is again knocking at the gate. This disease has a biennial periodicity. The epidemics of 1907, 1909 and 1911 are remembered. This periodic recrudescence is not peculiar to any one locality, but is apparently a world-wide phenomenon, for it has been noted in Sweden, Austria and Germany, as well as in New York. The disease returns with a rhythmic precision that cannot be regarded as accidental. There is evidently a law governng the epidemiology of infantile paralysis. Moreover, localities that are visited by the disease during one epidemic in a given city are practically spared when the disease returns two years later. A plausible explanation of this phenomenon is the hypothesis that the population in general in a given neighborhood during an epidemic acquire a relative and partial immunity which protects the individuals and particularly the children during the next epidemic, which is compelled to expend its virulence on adjacent districts. Poliomyelitis has been regarded as a disease of hot weather, but there is no direct correspondence, as witness the September epidemic of 1911 in Brooklyn. There are signs, at this writing, that an epidemic is on its way. Cases are reported in New Jersey, Iowa, Michigan, Minnesota, Virginia, Ohio, Massachusetts, Wisconsin, Louisiana and California. Physicians in general should bear in mind the possibility of poliomyelitis in the presence of an obscure febrile illness in a child, even before the onset of paralysis, particularly if hyperesthesia and profuse sweating form part of the clinical picture.—(*Medical Record,* August 2, 1913.)

Observations and Suggestions Regarding Lobar Pneumonia.

Edward E. Cornwall, of Brooklyn, emphasizes the following points regarding the treatment of penumonia: Give the patient plenty of fresh, cold air, but after defervescence protect him carefully from being chilled. Keep down the production of toxins in his intestines, which form a very important element in the toxemias of pneumonia, by giving him a fluid, antiputrefactive diet, supplying not more than 40 grams of protein daily, and possessing a fuel value of not more than 1,250 calories. Do not hesitate to give much less than the above quantities should abdominal symptoms appear. Include in his diet sufficient quantities of the salts needed by the body, particularly the salts of calcium. Do not delay too long stimulation of his heart; regulate the amount of the stimulation by the capacity of his heart muscle to respond as well as by the requirements of his circulation. Do not move his bowels unless they need it, which they will not be apt to do oftener than once in two days, if his diet is regulated so as to minimize injurious bacterial activity in his intestines, and let the methods used to move them be gentle.—(*Medical Record,* August 2, 1913.)

Tuberculosis

Nontuberculous Apical Lesions.

Maurice Fishberg, of New York, discusses thoroughly lesions of the apex frequently mistaken for tuberculous disease. These cases are not at all rare. Mouth breathers sometimes give the clinical picture of pulmonary tuberculosis. They show retraction of the right apex, dullness, altered breath sounds, and even circumscribed and localized râles, due to collapse atelectasis of the apical parenchyma. Collapse induration may ultimately result if these individuals do not have their polypi, adenoids, or hypertrophied tonsils removed. There are no tubercle bacilli in the sputum and the cases do not tend to follow the usual course of pulmonary tuberculosis, with fever, night sweats, tachycardia, malaise, languor, progressive loss of weight, etc. The cough may date back to childhood. Then physical signs of a lesion at one apex occurring after an attack of influenza, or met with in persons with pulmonary emphysema or defective muscular development, especially in young women, and among indoor workers generally, should not be hastily pronounced as indicative of tuberculosis. A person who never coughs and has suffered no progressive loss of weight, anorexia, malaise, etc., for months before the onset of an attack of grippe, may have a simple localized apical catarrh giving signs simulating those of incipient pulmonary tuberculosis, although it is not due to acid fast bacilli. On the other hand, the vast majority of cases of tuberculosis give a history of several attacks of "grippe," or "colds," extending over several months or years preceding the last "cold," which, in their opinion, was the beginning of their present illness. Clinical observation for a few weeks, with the judicious use of the thermometer and several examinations of the sputum, usually clears up the diagnosis even in cases in which the physical signs persist for months. Finally, in persons having a defect of the mitral valve a diagnosis of tuberculosis should not be made without the most valid evidence, i. e., positive bacteriological findings. Although mitral stenosis is not an absolute bar to phthisis, as some have maintained, it is exceedingly rare to find this disease complicated by tuberculosis. To diagnosticate tuberculosis in persons suffering from mitral stenosis without acid fast bacilli in the sputum is rather risky. Still, there are often met cases of mitral stenosis presenting symptoms and signs of tuberculosis of the lungs—subfebrile temperature, cough, hemoptysis, tachycardia, loss of weight, dullness, altered breath sounds, râles, etc., localized to one apex—to a perplexing degree. These are the most troublesome of nontuberculous apical lesions to identify. Only after careful observation for a long period of time is it possible in such cases to determine whether a given case of mitral disease is complicated by pulmonary tuberculosis or not. A good rule is to consider such cases tuberculous only when bacilli are in the sputum or when there are signs of cavities.—(*New York Medical Journal,* July 5, 1913.)

Allergy and Re-infection in Tuberculosis.

Edward R. Baldwin, of Saranac Lake, thinks some practical use of our knowledge of allergy in tuberculosis ought to be made. Baldwin thinks we are reasonably sure of some things, e. g., that most adults have received some tuberculous infection; that a variable degree of specific allergy is thus acquired; that during ordinary health the tissues repel tubercle bacilli, partly with the aid of specific allergy; that re-infection is mostly autogenous super-infection and due to disease, overstrain, trauma, or any cause of lowered vitality, whatever that may mean. Finally, adults are very little endangered by close contact with open tuberculosis, and not at all in ordinary association. Childhood is the time of infection, youth the time of super-infection, and that from extension of the primary disease. It is time for a reaction against the extreme ideas of infection now prevailing. The teachings of the health boards and lecturers need to be revised. The preachments about the danger of infection to adults in the present state of society are without justification from an experimental standpoint. This, of course, does not lessen the importance of hygiene in both child and adult life. In short, phthisiophobia has had no check from the time the knowledge of the bacillus was popularized. Cornet's dust experiments first gave the impulse to a fear, followed by Flügge's droplet infection, which has aggravated the solicitude felt by physicians and nurses and which has been gradually spread to the laity. In alleged infection due to recent exposure in adult life Bruck and Steinberg have found lack of proof, and even in alleged infection of married partners Weinberg, Pope and Pearson have been unable to discover satisfactory evidence.—(*Johns Hopkins Hospital Bulltin,* July, 1913.)

Artificial Pneumothorax and Other Surgical Methods in the Treatment of Pulmonary Tuberculosis.

Albert E. Taussig, of St. Louis, after a review of the recent literature of this subject, summarizes as follows: 1. The ideal indication for the production of an artificial pneumothorax is an advanced, unilateral pulmonary tuberculosis without extreme pleural adhesions. This may be extended to include early cases, if progressive and intractable. Moderate involvement of the other lung is not a contraindication. 2. The lung must be maintained in a completely collapsed condition for a year or more by means of successive injections of nitrogen. 3. Puncture is more pleasant for the patient than incision, but involves the risk of injury to the lung or gas-embolism. Incision should first be done and subsequent injections may then be done by puncture. A water-manometer controls the operation, however done, and avoids disaster if a negative pressure is shown, with increasing negativity on deep inspiration. 4. Extrapleural thoracoplasty must be substituted in the presence of extensive pleural adhesions. Indications otherwise similar. Must be extensive to be of value. 5. Phrenicotomy is simple, and may yet complement thoracoplasty. It may permit of adequate lung collapse, with a very much less radical rib removal. 6. The results of artificial pneumothorax are much more favorable than those of any other method of treating advanced pulmonary tuberculosis. Those of thoracoplasty, as reported, amply justify the operation in suitable cases.—(*Interstate Medical Journal,* July, 1913.)

Notes on the Use of Tuberculin in the Treatment of Advanced Pulmonary Tuberculosis.

William H. Lohman, of Brooklyn, gives the results of his experience during the last year and a half with tuberculin, in so far as they relate to advanced cases. On the basis of twenty-five cases, Lohman makes the following deductions:

First.—That providing reasonable care be exercised, no harm will result from using tuberculin in cases of advanced sub-acute and chronic ulcerative pulmonary tuberculosis.

Second.—That a few cases, perhaps one in five, show a very striking improvement from the use of tuberculin.

Third.—That a much larger proportion, perhaps 50 per cent., will do well while taking tuberculin and improve moderately. This may be shown by gain in weight, reduction of temperature, lessened cough and expectoration, improvement in physical signs, or disappearance of subjective symptoms; but the benefit is apt to be only temporary.

Fourth.—That the remaining cases show no improvement, the natural course of the disease being entirely unaffected by tuberculin injections.

Lohman agrees with Francine and Hartz, who recently tried tuberculin in a series of chronic fibroid phthisis cases and concluded, "that in advanced chronic tuberculosis when there is fair resistance and little or no fever, tuberculin is unqualifiedly a valuable therapeutic measure."—(*Long Island Medical Journal*, August, 1913.)

The Relative Value of Turtle Tuberculin in Tuberculosis.

W. J. Beattie of Littleton, N. H., and E. E. Meyers of New York, after discussing tuberculin and its discoverer, Robert Koch, aver that Piorkowski, working along the lines of Koch's discovery, isolated a living antigen in the form of tubercle bacilli recovered from a turtle, as far back as 1903 without in any manner questioning its non-virulence. Since that time he has continued his research along this line, and has at last succeeded in perfecting a tuberculin produced from the tubercle bacilli of a deep sea turtle which is non-virulent, and with which, he has successfully experimented with thousands of cases during the past few years at his laboratory in Berlin.

Further quoting Piorkowski, they quote from his lecture at the Royal Hospital for the Diseases of the Chest, London, April 1, 1913, when he said: "We must differentiate between mammals which produce their offspring alive, and the class to which human beings and oxen belong; and birds—i. e., that is, animals which lay eggs, thirdly, reptiles, which posses horny or long integument and also lay eggs. Lizards, crocodiles and turtles belong to that last class. Finally, we have to think of fishes which breathe as long as they are young through gills or by their lungs, and also lay eggs. We thus see very clearly that resemblances are to be found only among lung-breathing animals, and it is for this reason, probably, that the results described are obtained on the injection of tubercle bacilli of similar kind. It became very evident that turtles were especially adapted for our purpose."

In further describing his work along this line Piorkowski says: "It is very noteworthy that the turtle tubercle bacillus in its further behavior, both culturally and morphologically, displayed an extraordinary resemblance to the human tubercle bacillus. Its growth at 37 degrees F. is remarkably characteristic. The main point about this strain is that it can be used without risk of any manifestations—a circumstance which may be ascribed to the fact that for the last ten years it has been reinoculated afresh daily, and thus has acquired generally an extraordinary innocuousness, becoming both avirulent and atoxic."

The authors in explaining the biological action of Piorkowski's turtle tuberculin quote the latter as follows: "Let us for example, consider atoxic action a little more closely. When a poison enters the body—e. g., tubercle toxin—the first point concerns the existence of receptors which can take up the tubercular poison. If these do not exist, no infection by tubercle bacilli can occur, for the organism possesses congenital immunity towards the action of these bacilli.

"The harmless turtle tuberculous toxin combines with the receptors, and the combination is thrown off into the blood as antoxin. New receptors are formed in large quantity, but they are capable of seizing not only the turtle tubercle bacilli, with which they have been hitherto dealing, but also human bacilli, and thus render them harmless. If there is a profuse formation of new receptors, and if the human tubercle bacilli have increased unduly, complete recovery may be affected. The rationale of the cure is along these lines. There is also the additional advantage that turtle tubercle bacilli are innocuous and harmless, and therefore this method is especially well adapted for protecting inoculation.

"Recent investigations with turtle tuberculin show that tubercle bacilli, when grown in the blood serum of (cold-blooded animals) turtles change quite distinctively its bacteriological characteristics, particularly in lessening its virulence and at the same time increasing its power to form antibodies in the blood of tuberculous patients. This turtle tuberculin acts as a direct stimulant to the antibodies of tuberculosis exerting far greater beneficial effects than human tuberculin, even when the latter is given in the most carefully graded and guarded doses. Furthermore, turtle tuberculin produces only a very slight reaction, besides it possesses far greater immunizing properties than does human tuberculin with none of the latter's untoward effects."

According to the author's experience, the smallest immunizing dose was one minim of turtle tuberculin administered in 16 minims of normal salt solution. The interval between doses depends upon the recurrence or exacerbation of original symptoms, which is usually about seven days. Very slight reactions such as a rise of temperature to 100 F., and more or less languor for about 24 hours following the injection are the only reactions which occur even with a maximum dose.

The best site for injection of turtle tuberculin is in the fold of the gluteal region between the gluteus maximus and minimus muscles which location facilitates absorption.—*New York Med. Jour.*, Sept. 13, 1913.)

Massachusetts Favors Local Hospitals for Tuberculosis.

Massachusetts has found wanting the plan of treating tuberculosis as a State problem and has adopted the local hospital plan. The following extract from a letter to the State Charities Aid Association from Dr. John B. Hawes, secretary of the Massachusetts Trustees of Hospital for Consumptives, endorses the county hospital plan:

"The State of Massachusetts did treat tuberculosis at first as a State problem. In the days that the State sanatorium at Rutland was first established one idea was to endeavor to cure the incipient cases.

"As time went on we have certainly radically changed our views on the subject until those of us who are acquainted with the facts regard tuberculosis primarily as a local problem due to local causes. * * * Of course, this does not mean in the slightest that we are going to do away with our State sanatoria for the early and curable cases, as, in fact, we are constantly increasing all four State institutions. * * *"

That the trend is toward local hospitals for tuberculosis and away from State institutions, except for incipient cases, is shown by the fact that New Jersey, Washington, Illinois, Ohio, Maryland, Wisconsin, Minnesota and Kentucky, besides Massachusetts and Indiana, have local hospital laws similar to the county hospital law in New York.

Treatment

One Hundred and Seventeen Cases of Infantile Diarrhea Treated by Intestinal Implantation of the Bacillus Lactis Bulgaricus at the Babies' Hospital of the City of New York.

Ralph Oakley Clock, of New York, has obtained marked success in the treatment of enterocolitis and gastro-enteritis, without eliminating milk from the diet, through the employment of a pure culture of the true *Bacillus lactis bulgaricus*—the Type A organism, which was isolated from Bulgarian soured milk (yoghurt) and first described by Grigoroff of Massol's laboratory at Geneva. This culture was imported through the Johns Hopkins Hospital and elaborated in tablet form by the Hynson Westcott Laboratories at Baltimore. One or two tablets were usually given every two or three hours; but, in severe cases, two or even three tablets were given every two or three hours *before* and *after* each feeding—making a total, in some cases, of forty-two tablets in twenty-four hours. The cases treated included four of enterocolitis and 113 of gastro-enteritis, of which latter 47 were mild, 52 severe and 14 toxic. Seventy-four babies were continued on their respective milk diets and forty-three were placed on a starvation diet of barley water for twenty-four to forty-eight hours, after which small quantities of boiled, skimmed or whole milk were usually added to the diet. Twenty-nine of the forty-three patients aforesaid were given a preliminary dose of castor oil. No cathartic was given to any of the patients who were on a milk diet. Clock's conclusions are as follows:

1. There was gain in weight, in spite of frequent stools.
2. The stools rapidly changed to yellow.
3. Fever rapidly subsided.
4. Mucus and blood disappeared from the stools at the end of forty-eight hours.
5. The hygienic surroundings (all out-patients) of the patients and the degree of intelligence of the mothers had no influence on the results.
6. A starvation diet, accompanied by purgation, is productive of loss of weight and strength, and serves to prolong the course of the disease; and further, such a procedure can no longer be advanced as a rational method of treating infantile diarrhea.
7. The digestive powers in infantile intestinal conditions, even when associated with fever, are not so impaired as to prevent the digestion and assimilation of a milk diet. This fact is corroborated in typhoid fever, where the high caloric diet, in contrast to the starvation diet, has reduced the mortality to a remarkable degree.
8. In severe cases, best results are obtained by administering a large number of the tablets during the first two or three days of the treatment. As many as forty-two tablets in twenty-four hours have been given to very young babies without untoward effects.
9. The implantation method of treatment has progressed beyond the experimental stage, and the results of its use can no longer be questioned or disputed. This treatment has been proved of practical, clinical and scientific value; and its simplicity should appeal to every practitioner.
10. In order to secure the best results a pure culture must be employed; otherwise disappointment will follow. The culture must show large numbers of viable organisms. Lack of this has been the cause of the indifferent results obtained in previous years with lactic acid bacterial therapy—(*Journal A. M. A.*, July 19, 1913.)

The Treatment of Sciatica.

G. Alexander Young, of Omaha, points out the objections to the Lange-Schlœsser perineural injection of B-eucaine, and to the modification of Harris. First, cases are reported where repeated injections have failed of results; second, distressing paralysis of the perineal nerve has occasionally followed as a result; third, many cases of sciatica are cases of root sciatica or involvement of the roots of the sciatic and lumbar plexuses, and as such are not affected by the injection of the nerve in the gluteal fold. Young points out the advantages of the Cathelin and Sicard method of epidural injection. This method aims at the introduction of a 1 per cent. cocaine or 4 per cent. stovaine solution in normal salt into the sacral canal by way of the sublaminal opening in the fourth sacral segment. About 10 to 15 c.c. are injected at a time. This method has the advantage of reaching the sacral roots directly, and it is preferable except in cases dependent upon perineural adhesions lower down. There has been no record of perineal paralysis; the root sciaticas are more favorably influenced, and the injection is not so painful. The landmarks, in making the injection, are the two rudimentary laminal processes of the fifth sacral segment which bound the sides of the inferior opening of the sacral canal. A moderately slender needle, 6-8 cm. long, should be used. An ordinary lumbar puncture needle would do nicely. Glimm advises, after the epidural injection, that mechanical stretching of the sciatic be employed by the bloodless method, and reports cures of long-standing cases by this method. Blum recommends the method in severe chronic forms of sciatica, in the vesical crises of tabes, in intractable enuresis nocturna, and in root pains from compression by new growths. There seems to be no question but that the injection method, especially if combined with other measures, such as massage, thermal baths, diet and pilocarpine injections, offers the most promising as well as the most rapid means of treatment. The pilocarpine should be given hypodermically in daily doses of 1/6 to 1/10 gr., according to the reaction of the patient. The nitrate is the form used. This drug may be kept up for ten days or two weeks; to be discontinued then, if no improvement has taken place or to be continued if the case is progressing well. In the more chronic cases the pilocarpine is best given in the evening, the patient being sweated between blankets, and then rubbed down and placed into a warm bed for the night. Signs of overdose of pilocarpine are symptoms of vesical irritation and rectal tenesmus, which promptly subside upon withdrawal of the drug. It is well to take a little food following the pilocarpine to avoid distress from the increased flow of gastric juice, and it is best to urinate prior to the injection. The presence of heart lesions and advanced arteriosclerosis are contraindications for the pilocarpine.—(*Interstate Medical Journal*, June, 1913.)

The Antitoxin Treatment of Tetanus.

Ellis E. W. Given, of Philadelphia, emphasizes the prophylactic use of the specific antitoxin, because of the fact that tetanus toxin combines with nerve tissue and when so combined antitoxin is powerless to break up the union; but it is capable of neutralizing all toxin in the body not so combined if injected in sufficient dose and brought in direct contact with it. It has been shown that if a quantity of tetanus toxin known to be fatal to animals is mixed with sufficient antitoxin, the mixture

thus made can be injected into the animal without fear of tetanus resulting, the antitoxin having combined with the toxin forming a non-toxic mixture. On the other hand, toxin and antitoxin when injected simultaneously but at different points are absorbed with different degrees of rapidity. The toxin is absorbed more rapidly than the antitoxin and tetanus will develop to a mild but curable degree. Thus it is evident that injections of serum made during the incubation of the disease will give results varying according to the dose given, the tissue into which the injection is made, and the time that has elapsed since the infection. The standard prophylactic dose in the United States is 1,500 units. This should preferably be injected into or near the original wound. The wound, after thorough but gentle cleansing and enlargement by incision (under general anesthesia if local anesthesia is thought undesirable), is left "open," lightly packed with 10 per cent. iodoform gauze or plain gauze followed by sterile gauze dressing and bandage. No caustics or irritating chemical solutions or acids are to be used. Redressing should take place at least once every twenty-four hours, when all parts of the wound are to be exposed to the air and again dressed as on the first day. Subsequent injections of tetanus antitoxin should be given every seventh or eighth day if suppuration occurs and persists. This prophylactic treatment should be instituted as soon as possible after the receipt of any wound contaminated with street dirt, garden earth, stable manure, or other tetanus-bacilli-bearing matter. The healing of the wound depends upon three agents: antitoxin, to neutralize the toxin present, phagocytosis, to deal with the bacilli in absence of the toxin, and the surgeon, who shall with care remove all blood clots, foreign material, bruised or broken down tissue, and leave the wound in a condition for healing. Dried serum containing the antitoxin is not recommended; dependence cannot be placed upon its absorption. It should never supersede the standard liquid serum of known antitoxin content, unless it is the only serum obtainable. Given has never had tetanus follow a wound treated in the foregoing fashion. The cases of tetanus encountered by him have had no prophylactic treatment. In the presence of actual tetanus the treatment of the wound is the same, the necessity of gentle handling being borne in mind. A general anesthetic is often indicated for the wound treatment on account of the spasms. The patient should be in a quiet and darkened room and given supporting systemic treatment and highly nourishing liquid food, given through a stomach tube if necessary. Sedative drugs are to be administered as indicated. Free venesection and lumbar puncture should be instituted, to eliminate from the body as much of the toxin as possible, and huge doses of antitoxin injected to neutralize the unabsorbed toxi ncirculating in the body, together with intraneural injections to reach and neutralize the toxin contained within the nerves. No limit should be placed on the amount of antitoxin to be injected, if obtainable, for it will surely neutralize all the unabsorbed toxin, and if this is neutralized and the bacilli have been removed by the surgeon so that no more toxin is formed to be thrown into the system for absorption, the body may be able to combat successfully the amount already combined with nervous tissue.—(*American Journal of Surgery*, June, 1913.)

Remarks on Gastric Disease.

H. W. Lincoln, of Brooklyn, New York, has the following to say about gastric and duodenal ulcers and their alleged relationship to carcinoma. As to the evidence proving that there is danger of carcinomatous degeneration of an ulcer base, it can only be said that that is still in a sense a partially open question. In Osler's series of 150 cases of stomach cancer he finds but four in which there was a possible history of previous ulcer. It would seem that experience even at the present time teaches us that the very great majority of cases of stomach cancer occur in persons who have been particularly free from previous digestive trouble during their lives. In one breath we are told that one of the main indications for surgical treatment of ulcer is to remove the danger of future malignant degeneration. In the next, we are instructed that duodenal ulcer occurs three times as frequently as gastric. Duodenal ulcer takes place in the first part of the duodenum, while cancer, when it does occur, is found in the second portion. Lincoln can recall but three or four instances where the cancer was engrafted upon an ulcer base, and those were, of course, in the stomach and proven by operation. At a conservative estimate, fully 50 per cent. of ulcer cases may be cured medically and stay cured. We should not take it for granted that duodenal ulcer is three times as frequent as gastric, simply because operative statistics say so. Patients about to be operated upon should have the matter clearly laid before them and should not be given promise of unqualified, permanent freedom from further digestive trouble, as is still frequently done. Something more than gastroenterostomy should be done for the radical cure of ulcer, and also, if the danger of future carcinomatous degeneration is anything like as great as is just now claimed, to relieve for all time the ulcer-bearing area from irritation. Not over 40 per cent. at the outside of cases seen in the daily work done by the average internal medical man are organic, in a surgical sense, either of the stomach or the other abdominal organs.—(*Long Island Medical Journal*, July, 1913.)

Intravenous Injections in Concentrated Solution.

Bayet recommends as the result of his own experience the following simple method of Ravaut for injections of neosalvarsan: About 10 cc. of distilled and filtered water are poured into a receptacle. Neosalvarsan is added and it dissolves immediately. The solution is injected slowly intravenously. The quantity for dissolving remains the same for the different sized doses. This method has the advantage that only small quantities of the fluid need to be injected, that the injection takes only a short time (one to two minutes) and that there are no systemic disturbances such as appear when the larger quantities of fluid are used. —(*Jour. de Bruxelles*, No. 25, 1913.)

The Treatment of Rheumatism.

Klare convinced himself of the specific influence of melubrin in acute articular rheumatism in a most striking case. I administered it to a young man, about 23, with a severe attack of acute articular rheumatism (almost every joint was affected). He had already been treated with large doses of salicylates for three weeks without the slightest influence on the temperature or the swollen joints. On the first day under melubrin treatment (5 grams), the temperature declined from 102° F. to 99°. The patient was able to move his shoulders without pain, although previously this motion had been very painful. Three to five grams of melubrin were given daily with the result that the patient became free from fever the third day, and the affected joints became normal within a few days.—(*Deutsch. med. Woch.*, No. 33, August, 1913.)

Skin Diseases Due to Milk-Fat.

D. W. Montgomery and G. D. Culver, of San Francisco, have investigated the effects of milk-fat on the skin. They note that eczema occurs frequently at both extremes of life in infancy and in old age, when milk is the chief or sole diet. Years ago Dr. Martenache drew attention to the occurrence of acne due to the use of butter. While it is a common observation among the laity that butter will cause pimples, yet the effects of rich milk or ice cream are overlooked. The authors noted that rich milk or cream was worse than butter in producing abnormal secretions of the sebaceous glands.

Milk is exceedingly easy to digest and is anti-putrefactive in the alimentary canal. When lactic acid bacteria attack milk sugar, both lactic and succinic acids are formed which hamper the proteolytic bacteria (those that split by the proteids) that cause putrefaction and give rise to poisonous ptomaines. The digestion of fats in milk products is a much simpler process than the digestion of either carbohydrates or proteids. They enter the circulation comparatively unchanged and are either stored up almost entirely unchanged or burnt to produce heat. Butter is particularly easy to digest, and if it remains too long in the stomach, butyric acid may be split off from the glyceryl butyrate and cause indigestion.

Previous experiments have proven that a particular fat still retains its characteristic properties after being absorbed and it is only fair to believe that butter, cream, or even rich milk, will act the same, and that if a person takes an excess of milk-fat he will have an excess of milk-fat in his skin. Summarizing, Drs. Montgomery and Culver say that the quantity and quality of fat ingested does not act directly as a poison, but it lowers the resistance of the skin to bacterial attacks, rendering the host liable to acne, carbuncle and erysipelas.—(*Journal of Cutaneous Disease.*)

The Roentgen Ray in Cancer.

The loss of faith in the Roentgen ray in the treatment of cancer by the profession is considered unfortunate by W. A. Pusey, Chicago. He says the most cursory observation leaves no doubt that the X-ray can destroy carcinoma on the surface of the body. This is done most readily, perhaps, in rodent ulcer, but it is possible also in typical squamous-cell epithelioma. He says that, almost without reservation, any epithelioma that has not metastases and which has not deeply involved the subcutaneous tissue can be converted into healthy scar tissue by the X-rays. Where there is deep involvement, as in epitheliomas invading the orbit or bones of the face, the X-rays may fail, but he has seen unexpected results in these cases. Where there are metastases in the neighboring lymph-nodes we also sometimes have success. Some of his cases have gone as long a time as etn years without a sign of recurrence. He has also much evidence to show good effects of the rays on cancer of the deeper tissues, and publishes cases. Sarcoma tumors, as a rule, yield to X-rays more rapidly than carcinoma, but on account of their more rapid dissemination, radical benefit is less frequent. He believes also in their prophylactic body. He specifies these because local experience has shown that in cases where the disease is widely disseminated and in cancers in the deep cavities of the body, the X-rays are practically of no value.—(*J. A. M. A.*, August 23.)

Gynecology

The Treatment of Endometritis.

George Gray Ward, of New York, summarizes as follows the essential factors to be borne in mind in the treatment of endometritis:

1. That leucorrhea, the most prominent manifestation of the disease, comes from the uterine cavity, and not from the vagina.

2. That endometritis may be divided into two great classes, those of bacterial origin and those of non-bacterial origin.

3. That in the acute infective cases the discharge is pus containing active, demonstrable organisms.

4. That in acute infective cases the treatment to be observed is masterly inactivity.

5. That in the common variety of so-called chronic hyperplastic endometritis, which is by far the most frequent type we have to deal with, there is no infection, and the leucorrheal discharge is an excessive secretion from the cervical and utricular glands, the result of venous congestion.

6. That the first and most important principle to be observed in treating these cases is to determine the cause of the venous stasis and to treat the same by appropriate measures.

7. That the curette is our most valuable means for removing the greatly thickened and diseased endometrium, but if it is used alone, without correcting the cause, only temporary relief of symptoms is obtained.

8. That vaginal douches, glycerin packs, and postural methods, if properly employed, are valuable adjuncts in aiding and improving the pelvic circulation.

9. That in the class of cases which are probably dependent upon disturbed ovarian function (either excessive or diminished), such as in the preclimacteric menorrhagias and metrorrhagias, arteriosclerotic uteri, chronic metritis, fibrosis, etc., and which are not benefited by the curette and local measures, we must look for a cure in the direction of ovarian control, possibly by the *X*-ray or by sera from antagonistic glands of internal secretion; otherwise complete ablation of the ovaries or hysterectomy is our only resort.

10. That in submitting curettings to the pathologist it is imperative that the relation of the time of the curetting to the menstruation be stated, in order to obtain an opinion of value.—(*New York Medical Journal,* June 7, 1913.)

The Iodine Treatment of Gonorrhea in the Female.

O. Hofmann, of Kansas City, outlines the following treatment for gonorrhea in the female which he has found signally successful. The patient is placed in the dorsal position as for ordinary vaginal examination; the labia are separated with the thumb and index finger of the left hand, exposing the vestibule, clitoris and meatus urinarius; the exposed parts are then swabbed with a solution of 3.5 per cent. iodine crystals in 95 per cent. alcohol, including the labia minora and inner surfaces of the labia majora. Then the orifices of Skene's glands are searched for, and a few drops of the same solution forced into them by means of an ordinary hypodermic syringe to which is attached a needle made blunt by filing. Then the external openings of the vulvovaginal glands are searched for and the injection repeated. It will seldom be found necessary to treat the urethra directly. The patient is now placed in the Sims' position, Sims' speculum introduced, the vagina swabbed dry with cotton and the presenting cervix (not the canal) painted thoroughly

with the iodine solution by means of a cotton swab about the size of a hickory nut firmly fastened in the ordinary dressing forceps. Then the anterior wall is thoroughly painted, after which both the right and left sides are similarly treated. The swab is now pressed firmly up into the posterior cul-de-sac and the speculum partly withdrawn, rotated, and pressed against the anterior vaginal wall, after reintroduction as far as possible, the posterior wall being now swabbed in turn. The swab is now removed and a strip of gauze introduced as high up against the posterior wall as possible. Finally remove the speculum, allowing the gauze to protrude beyond the introitus. A bivalve may be used, small areas being painted in turn as the instrument is rotated, after which the swab is firmly pressed into the posterior cul-de-sac, the speculum withdrawn, the vaginal walls allowed to collapse, and the swab slowly removed with a rotary motion, thus insuring a complete and thorough application to the tissues. A small piece of gauze is then introduced as before. In protracted cases presenting involvement of the cervix and uterus, Hofmann, after treating the cervix, injects a drachm of the iodine solution into the cavity with an intrauterine syringe, care being taken not to dilate the cervical canal or use any force on the piston of the syringe. The vagina is then treated as in acute cases. The applications are repeated every third day both in the acute and chronic forms of the disease. If the urethra proper requires any direct local treatment, the applications should be preceded by cocainization. The patient is instructed to remove the gauze drain at the time of the first douche, which should be taken about four hours after the local treatment. In all cases hot douches are ordered to be taken in the recumbent position with the hips elevated. Use from four to six quarts of hot normal salt solution, as a douche, twice to four times daily, each followed by a one quart injection of permanganate of potassium solution 1-5000 or picric acid 1-250. Doses of 5 to 7½ gr. of urotropin are given four times daily with plenty of water. Hofmann acknowledges his indebtedness to Bovée, of Washington, who suggested the iodine treatment.—(*Interstate Medical Journal,* August, 1913.)

Emptying the Uterus as a Method of Treatment of Puerperal Eclampsia.

Reuben Peterson, of Ann Arbor, has reached the following conclusions in respect to the treatment of eclampsia by emptying the uterus:

1. Since the cause of eclampsia is still unknown, its treatment must of necessity be empirical.

2. Only through the analysis of large numbers of cases can the value of any particular treatment be correctly estimated.

3. In a large series of cases of eclampsia prompt delivery gave a maternal mortality of 1.59 per cent., as compared with a maternal mortality of 28.9 per cent. where the delivery was long delayed.

4. Where the uterus is emptied immediately or very soon after the onset of the first convulsion, the maternal mortality is still lower.

5. While in a large group of cases the maternal mortality is 5 per cent. in favor of conservative treatment and spontaneous labor in cases occurring before 1900, between 1900 and 1912, on account of better and more prompt obstetric surgery, the figures are reversed and show that the maternal mortality is lower by 4 per cent. after the radical as opposed to the conservative treatment of the complication.

6. Therefore, the treatment of antepartum eclampsia should consist of emptying the uterus as quickly as possible after the onset of the first convulsion.

7. The operative procedure which will empty the uterus the quickest with minimum trauma and shock to the eclamptic mother and child should be selected.—(*New York State Journal of Medicine,* August, 1913.)

Note.—In the same issue of the *N. Y. S. J. of Med.,* E. Gustav Zinke pleads earnestly for the medical versus the surgical treatment of eclampsia, and offers statistics which seemingly controvert those of Peterson.

The Pathology and Treatment of Uterine Hemorrhage.

Beckwith Whitehouse, of Birmingham, England, affirms that no treatment of uterine hemorrhage can be rational, unless the cause is established; the empirical administration of hemostatic drugs is frequently useless, and indiscriminate curetting is dangerous. The menorrhagia that occurs in young girls at the age of puberty is probably due to the association of functionally mature ovaries with a deficient uterine musculature. It tends to spontaneous cure and should be treated by rest and, if possible, removal to a higher altitude. Hemorrhage in young women may be due to mucous polypus, adenomatosis uteri, or bacterial infections of the uterus. A practical method of investigating the bacteriology of the uterus is by the collection of the menstrual blood. Hemorrhages at the menopause are frequently the result of increased arterial tension, portal obstruction, or degeneration and fibrosis of the uterus secondary to arteriosclerosis. It is probable that some cases of fibrosis uteri are syphilitis in origin. Treatment must be to reduce vascular tension. Ergot usually fails, and it may be necessary to remove the uterus. Faults in the calcium metabolism may be the cause of obscure uterine bleeding, which may be cured by the dicovery of the cause and the administration of calcium salts. Occasionally the combination of thyroid tissue with calcium is beneficial. In every case of uterine hemorrhage it is essential to look for a general cause before the local pelvic condition is investigated.—(*The Practitioner,* June, 1913.)

Carcinoma of the Cervix of the Uterus.

Howard A. Kelly and J. Craig Neel, of Baltimore, concludes that the extensive abdominal removal of all uterine cervical carcinomata is justified where there is any hope of complete excision, unless there is some special contraindication to surgical interference. This operation, if properly performed, notwithstanding the high primary mortality, has given the greatest percentage of permanent cures of any therapeutic measure thus far suggested. An exploratory operation is often necessary to determine whether or not a case is operable. Obesity is not necessarily a contraindication, since the wide horizontal lipectomy decreases the depth of the field of operation. The preliminary catheterization of the ureters is a valuable aid, especially in fat patients, and does not necessarily increase the probability of fistula and secondary infection of the urinary tract. Decreased cervical mobility is sometimes due to a secondary inflammatory reaction and may be improved by a thorough cauterization of the primary growth. Preliminary cauterization and disinfection of the primary growth are advisable in all cases. Extensive glandular dissection is not justified, since the increase in permanent cures does not compensate for the rise in percentage of the primary mortality. By improvements in the technique of the operation, the primary mortality has been decreased from 28.5 per

cent. for the first seven years to 11.5 per cent. for the last five years. Further simplification and perfection of the details of this operation may yet reduce the primary mortality to nearly that of the ordinary laparotomy and make it more generally available.—(*Bulletin of the Johns Hopkins Hospital,* August, 1913.)

Public Health

The Typhoid Carrier Problem.

C. L. Overlander, of Boston, Mass., concludes his paper on the typhoid carrier problem as follows:

Until some more easy, rapid and accurate method has been devised for determining the presence of the typhoid bacilli in the excreta, and for the subsequent treatment of the patient to rid him of them, detention of such persons in quarantine until successive negative findings, of exceedingly doubtful value, have been obtained, is a proceeding unwarranted viewed from either the standpoint of the patient himself, the health officer or the community. Such a procedure, involving a false confidence in their freedom from infected material, in those released would, in Overlander's opinion, be productive of more harm than good. It would be more practical, less arduous and better conserve the public health to regard each individual recovering from typhoid fever as a potential carrier, to instruct carefully such persons concerning this subject and the precautions they should take and if possible to forbid them to handle personally public food supplies. The application of any approved method for the eradication of typhoid, however good it may be, must not be limited to any community, city, state or nation. It is a problem world-wide in its scope, and success will be attained only by the hearty co-operation of every individual in every civilized country.—(*Boston Medical and Surgical Journal,* July 10, 1913.)

Milk Condemnation.

The *Bulletin* in discussing the right to condemn milk, is reminded of the underlying unity of our judicial system, which transcends state boundaries and local forms, by the fact that a recent decision of the Wisconsin Supreme Court is recorded as furnishing the first legal test of the right of the Department of Health to destroy or confiscate milk without notification of the owner. This decision, which was subsequently affirmed by the United States Supreme Court, may now be invoked as supporting the right of this and other health boards to destroy milk which is adulterated or below standard without notifying the owner or giving him an opportunity to defend the purity of such milk. Such drastic action is now taken by the department only when milk is above the required temperature or when it contains visible dirt. When adulteration is suspected, samples are analyzed and the dealer has an opportunity to make his defense in court.

In the Wisconsin case an ordinance of the City of Milwaukee requiring a certificate of tuberculin testing was upheld by the Circuit Court, and, in the present decision, affirmed by the Supreme Court. The plaintiff raised the usual issue that the ordinance took his property without due process of law, but the court pointed out that his very allegation held not that the cows were free from infectious diseases, but only "so far as he (plaintiff) is able to discover." For the purpose of such a necessary regulation for the protection of the public health "the police power of the state must be declared adequate," and the lower court was confirmed in its opinion "that the destruction of the milk was the only available and efficient penalty for the violation of the ordinance."

The Open Window.

A medical inspector of the Philadelphia public schools, with the co-operation of teachers and parents, recently made an experiment to determine the value of cold fresh air in school rooms, which was reported in the *American Journal of Public Health.* He opened the windows at top and bottom, and kept them open throughout the winter. The room was shut off from the heating plant of the building except on the occasional days when the temperature fell below forty-five degrees; but the children of course wore extra wraps and had frequent drills and exercises.

Week by week during the fall and winter and spring this physician weighed and examined the pupils, watched their study and their play, and compared their progress in health and scholarship with that of pupils in another room of the same building. In that other room, the pupils were of the same grade, and of about the same number, but the room was heated and ventilated according to the usual methods. The pupils in both rooms were normal healthy children from the same kind of homes, so that the test was as fair, accurate and searching as possible.

At the end the inspector found that the pupils in the open window room had gained in weight on an average more than twice as much as those in the warm air room. The pupils in the open room kept wholly free from colds and were much more regular in attendance than the others. They were also more alert, free from day-dreaming, quicker to learn, needed less review work and were better behaved. In health and happiness, in development both of mind and body, the children of the room with open windows had a clear advantage over the others.

In these days the gospel of sunshine and pure air ought to need little preaching. Most of us accept it but we do not always practice the doctrine that we believe in and preach. This Philadelphia experiment lay not in giving the open-air treatment to sick children —which everyone approves; it lay in giving to well children some of the good things that nature intended that they should enjoy and in demonstrating to the school officials and parents the advantages of lower schoolroom temperatures.

As a result the school board, recognizing their value, has authorized the establishment of open window classes in several other Philadelphia schools.

The Crying Need for Rural Sanitation.

Dr. Carl L. Alsberg, Chief of Bureau of Chemistry, U. S. Department of Agriculture, in an address September 9 before the American Public Health Association on the limitations of the Federal Food Law said:

"It is unfortunate that the large cities derive such preponderating advantages from the Federal control of interstate commerce. The reason is that systematic health protection work in the United States is largely confined to the big cities.

"In many States the large cities are the only points which have any real sanitary protection. Our rural population of 49,000,000 people, including the 30,000,000 who live on farms, with the exception of those fortunate rural dwellers in one or two exceptional

States which regard the health of the country people as also important, receive very little State health protection and maintain no local protective system of their own against contaminated local milk, meat, shell-fish, fish or vegetables. Moreover, only a small number of these rural inhabitants are safeguarded, by competent inspection, against polluted water supply or sewage disposal methods dangerous to health and life.

"To this rural and unprotected population we can add the bulk of the 14,000,000 people who live in towns, cities and suburbs of less than 25,000 inhabitants, excepting those here and there who happen to dwell in the more progressive towns, or in those few hamlets located in the exceptional States that have already awakened to the importance of rural sanitation. If we wished we could go even further and add the populations of many cities of 25,000 or 50,000 people which maintain no health officers; and of those cities which have health officers but so cripple them with poor laws or ordinances, or with insufficient funds, as to make their food inspection work most ineffective. The probability is that upward of 70,000,000 out of our 91,000,000 people have no efficient and systematic protection from the major causes of the spread of typhoid, tuberculosis, deadly intestinal diseases of infants, scarlet fever, septic sore throat, trichinosis, and other ailments resulting from the circulation of disease producing organisms.

"Until severe penalties are inflicted for failure to report cases of infectious diseases, until failure to do so results in the cancellation of the license to practice medicine there will be no really reliable statistics. And this will only be brought about when the State health services throughout the land furnish a permanent career for life instead of being, as they are but too often at present a side-line of politics—medical or otherwise. And these services should furnish a career like the Federal Civil Service, to sanitary engineers and chemists as well as to physicians. The people must learn that their health is too valuable to entrust to temporary health officers or to physicians who devote to the discharge of their duties as Health Officers, only such irregular moments as can be spared from their private practices."

The Recruiting Station of the Fly.

Dump piles are as numerous as "flies in Ireland," says *Public Health* of Michigan. The fly is accurately described as the "most dangerous animal in the world." Napoleon could not maintain his hold in Egypt because of the fly. In the Spanish-American war four American soldiers were killed by the common fly to every man who fell by a Spanish bullet. Reliable statistics charge the house fly as the conveying cause of twenty deaths a day in the city of New York the year round. An eminent medical authority has recently stated that the fly as a carrier of the germs of typhoid fever annually costs the people of the United States for sickness, medical expense and lost time the vast sum of three hundred and fifty millions of dollars. The State Agricultural Station in Connecticut examined 400 flies. One innocent looking fly carried 6,600,000 germs, and the majority of the 400 were loaded with more than 1,250,000 bacteria each.

The dump pile is the recruiting station of the typhoid, dysentery, Asiatic cholera, tuberculosis, smallpox carrier, the common house fly making his home and breeding place in the dirty dumps. Cut out the breeding places and you will most effectively swat the fly.

The Physician's Library

A Clinical Manual of Mental Diseases. By Francis X. Dercum, M. D., Professor of Nervous and Mental Diseases in Jefferson Medical College. Cloth. 425 pages. Price, $3.00 net. Philadelphia and London: W. B. Saunders Co., 1913.

Deserting the broad highway of abstract etiology, of complex classification and abstruse description, Dercum presents a book from the physician's standpoint, that is from the clinical end. He makes a volume for the medical man, not the psychiatrist. He gives the elementary forms of mental trouble and then works up to the various mental disorders which are seen in everyday work. He lays stress on that not uncommon and most unfortunate condition, parturient insanity, as well as to the other forms of insanity.

A valuable feature, in addition to the very comprehensive and excellent chapter on treatment, is that portion devoted to the phychologic interpretation of the symptoms, as this gives the physican a clearer insight into many conditions, the interpretation of which might cause him serious trouble.

The volume is entertainingly written and of great professional value.

Collected Papers by the Staff of St. Marys Hospital (Mayo Clinic) for 1912. Cloth, 842 pages, 219 illustrations. Price, $5.50 net. Philadelphia and London: W. B. Saunders Company, 1913.

The sixth volume of this series maintains the high standard set by its predecessors. It contains 72 articles written by 23 members of the staff of the Mayo clinic and presented to the profession through medical journals in 1912. They are given under the general headings of Alimentary Canal, Hernia, Urogenital Organs, Ductless Glands, Head, Thorax, Spinal Column and Extremities, Technic and General Papers. It would be out of the question to take up this wealth of splendid material in the manner it deserves and it would be decidedly bromidic to note the high place these papers deserve in current medical literature.

To those men not permitted to make a pilgrimage to Rochester, an excellent opportunity to acquaint themselves with Rochester technic is offered through the pages of this highly illustrated and altogether superior volume.

Manual of Medicine for Nurses and Housemothers. By Geo. H. Hoxie, M. D., and Pearl Laptad, of Kansas City. 2nd edition. Cloth. 350 pages. Illustrated. Price, $1.50 net. Philadelphia and London: W. B. Saunders Co., 1913.

The second edition is a rewritten and greatly improved successor to the first. The purpose of the book is to give the attending physician more intelligent cooperation from the nurse and mother. The idea is thoroughly carried out. While the criticism may be made that it assists home medication, a careful inspection disproves any such idea. The more important diseases are considered and their management explained. The book is one which the physican can safely place in the hands of intelligent women.

Treatment of Sexual Impotence. By William J. Robinson, M. D., of Bronx Hospital. 2nd edition. Cloth. 420 pages. Price, $3.00 net New York: Critic and Guide Co., 1913.

This book is intended for the general practitioner and is a resume of the author's wide experience in the sexual field. The book is divided in eight parts, i. e.,

(*Continued on p.* 20.)

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masturbation; pollutions; impotence in the male; sexual neurasthenia; sterility; sexual disorders in women; priapism and miscellaneous topics. As is to be expected Robinson goes into the subject thoroughly, and calls a spade a spade, with the result that he has evolved a volume full of meat and of great value to the physician, whose ingenuity is often taxed to the utmost to discover the whys and wherefores at the bottom of impotence. The racy Robinsonesque style adds interest to the text matter of the volume.

The Posture of School Children. By Jessie H. Bancroft, Assistant Director of Physical Training in the New York Public Schools. Cloth. 320 pages. Illustrated. Price, $1.50 net. New York: The Macmillan Co., 1913.

By means of many illustrations and a very enlightening text one gains a clear insight into the proper postures for school children. When one considers the seeds of disease sown in our young on account of incorrect methods of sitting, one can appreciate the value of digesting the rules and regulations laid down in this book, which shows the results of years of practical experience. A sound mind in a sound body should be the aim of every one interested in the education of the young and this work may be looked upon as a guide to that end.

Blood Pressure in General Practice. By Percival Nicholson, M. D. Cloth, 160 pages. Price, $1.50. Philadelphia and London: J. B. Lippincott Co., 1913.

A vast amount of practical information is contained in this little book and it is so logically classified that no confusion is left in the mind of the reader, whose ideas, gathered from a wealth of medical journal articles, may have been more or less mixed. After describing technic, instruments and basic factors the author discusses the subject under the general headings of hyper and hyper-tension and takes up different diseases, discussing the blood pressure in each. The book is highly instructive and clearly elucidates the intricacies of blood pressure.

Dr. Nicholson has devised a blood pressure and clinical chart, which aids the physician in noting any appreciable change.

Operative Surgery. By John F. Binnie, A. M., C. M., of Kansas City. Sixth edition. Cloth, 1,250 pages, 1,438 illustrations. Price, $7.00 net. Philadelphia: P. Blakiston's Son & Co., 1913.

A comprehensive book which runs through six editions in nine years may truthfully be said to have touched a popular chord. Binnie's fifth edition was favorably commented upon in these columns a little over a year ago. The present edition is even better, for some new operative procedures are described and the volume has been given the benefit of the latest surgical methods. A new chapter on tumors is presented and various operations are treated from a different angle. This work is intended for surgeons and for description of operative technic it cannot be excelled.

The clear exposition of procedure is aided materially by many and excellent illustrations.

Physiology. By W. D. Halliburton, M. D., Professor of Physiology in King's College, London. Eleventh edition. Cloth, 925 pages, illustrated. Price, $3.00 net. Philadelphia: P. Blakiston's Sons & Co., 1913.

This book, the twenty-fourth edition of Kirke's Physiology, has undergone a thorough revision since the last edition a year ago. It is one of the most complete treatises on the subject in the English language and the new matter contained in this volume, on formation of urine, respiration, the application of physical chemistry to physiology and the like, makes it of the greatest value to the student of physiology.

A Mental Hygiene Handbook.

A handbook on mental hygiene, for popular use, containing discussions on nearly every phase of mental idea he may be. To properly appreciate medical ideals troubles, has just been published by the New York State Charities Aid Association. Some of the topics treated are: Unsoundness of Mind a National Handicap, Prevention by Popular Education, Social Service in Preventing Mental Breakdowns, Self Management, Day Dreams and Thinking, Alcohol and Insanity, Early Manifestations of Mental Disorder, Syphilis and Insanity.

Among the contributors to the volume are: Dr. L. F. Barker, of Johns Hopkins; Dr. A. Jacobi; President Butler, of Columbia; Dr. Smith Ely Jelliffe, of New York; Dr. E. E. Southard, Director of the Boston Psychopathic Hospital; Dr. Adolph Meyer, Phipps Psychiatric Clinic, and Dr. Wm. Mabon, Superintendent of Manhattan State Hospital.

Mencken's Reviews.

The brilliant book reviews of H. L. Mencken in the *Smart Set* are occasionally distinguished by some sallies against emotional critics of the medical profession. Such expert lay satirists often do better justice to these gentry than medical writers are capable of administering and should receive due credit. In the August issue appears the following gem. Mencken, after disposing of La Follette's Autobiography, takes up Coleridge in the following fashion:

So much for poor Bob and his sanguinary battles for the lowly. All the combats of the Hon. Mr. Coleridge, whose "Memories" (*Lane*) come next, have been fought for the guinea pig. He is the *shamash* and *capo comico* of the English anti-vivisectionists, and the best years of his life have been devoted to excoriating the doctors. In this pious enterprise he has been greatly helped by the fact that he is a son of the late Lord Coleridge, Chief Justice of England, but it didn't help him much when he was haled into court by a doctor who objected to being excoriated, and a rambunctious jury mulcted him in ten thousand dollars damages. Stephen's book is made up, in the main, of witless and uninteresting anecdotes about old friends of his father —Gladstone, Manning and Jowett among them. For the rest, he devotes himself to proving that all science is evil. What is it, after all, this science? Empty bosh! A curse to man! Ah, for the good old days when the madstone was a sovereign balm for hydrophobia, and whiskey yet cured snakebite, and camomile tea was pumped into the yowling young, and London was six days a-horse from Liverpool, and all Jews and Catholics were disfranchised, and men were hanged for one hundred and fifteen different crimes, and the honest English bathed but once a year, and consumptives enjoyed the sacred right of unlimited expectoration, and doctors were ranked with barbers, and the death rate was sixty per thousand of population per annum. Darn Darwin! To Hades with Huxley! A greater man that either is the Hon. Stephen Coleridge. As he hints himself, he has "retained the old and beautiful ideals of life in a faithless world;" he has "kept the essential vulgarity of science out of his life;" he has a mind that is "stored with the greatest and best that has been said by the widest and holiest of all the

(*Continued on p.* 22.)

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Every physician has cases in which an individual, scientific, personally directed course in proper exercise, breathing, bathing and diet would greatly assist to build up.

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I teach women how to walk, how to stand correctly, how to breathe, how to exercise normally, so that no organ is displaced by over or improper exercise or imperfect poise.

The mental interest and incentive developed by the individual lessons dispel that languor and indifference which physicians often find hard to cope with.

I study each pupil's special requirements, and prescribe for her individually, just as you prescribe for your patients. I give no promiscuous exercise, but direct each woman according to her needs and her strength. I have spent years in the study of anatomy and physiology, and accept no cases where pronounced pathological conditions are present, as I know the possibilities of my work and I know its limitations.

In many cases I insist that the pupil have the consent and advice of her physician; in others, I require a regular weekly examination by physicians.

For 12 years I gave personal instructions to women before attempting instructions by mail. Upon request, I will send you, with information concerning my work, any one of the following lectures: A Good Figure; Circulation; Body Manikin and Position of Vital Organs; Ideals and Privileges of Woman; Character as Expressed in the Body; Mind Over Matter—The Nervous System—Effect of Habit Upon Life—Foods; Self-Sufficiency—Mental Poise; Motherhood; The Vital Organs—Their Uses and Abuse.

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ages." And yet, as I have remarked, that contumacious jury found against him, and he had to disgorge for fibbing about the doctor. * * * His portrait is his frontispiece. A smug gentleman in a white necktie, smooth of gill and chin, and fast growing bald. A countenance full of conscious rectitude.

BOOKS RECEIVED.

All books received will be acknowledged in this column, and those which warrant further notice will be given a more extended review in a later issue.

Infection and Immunity. By Charles E. Simon, M. D., Professor in the College of Physicians and Surgeons, Baltimore. Cloth. 325 pages. Published in 1913 by Lea & Febiger, Philadelphia and New York.

Gray's Anatomy. By Henry Gray, F. R. S. Revised by E. A. Spitzka, M. D., of Jefferson Medical College. Cloth. 1502 pages and 1225 engravings. Cloth, $6.00; leather, $7.00 net. Published in 1913 by Lea & Febiger, Philadelphia and New York.

Progressive Medicine. Vol. XV., No. 3. Edited by H. A. Hare, M. D., and L. F. Appleman, M. D., of Jefferson Medical College. Paper. 303 pages. Illustrated. Price, $6.00 per annum. Published by Lea & Febiger, Philadelphia and New York.

Malaria. By Graham E. Henson, M. D., of Florida. Cloth. 190 pages. Illustrated. Price, $2.50 net. Published in 1913 by C. V. Mosby Co., St. Louis.

John Barleycorn. A novel, by Jack London. Price $1.25. Published by the Century Co., New York.

Marriage and Genetics. By C. A. L. Reed, M. D., of the University of Cincinnati. Cloth. 182 pages. Price, $1.00 net. Published in 1913 by the Galton Press, Cincinnati.

Surgical Clinics of John B. Murphy, M. D. Volume II, Number 4 (August, 1913). Paper. 206 pages. Illustrated. Price per year, $8.00. Published by W. B. Saunders Co., Philadelphia and London.

Hospitals

The Cost of Hospital Building.

An item of news in the *International Hospital Record* of July 2 calls attention to the cost per bed of erecting a hospital. At Americus, Ga., a thirty-five bed hospital has been contracted for at a cost of $15,000, this being an average of less than $500 per bed. This hospital is to be 95x65, two-story and basement, with laundry, ice-making and refrigerating plant, stationary vacuum cleaning system, etc., and the only apparently important cost reduction lies in the fact that the building is to be of brick veneer, instead of solid brick or brick and stone. This point is not to be commended, but the money saving in this can hardly be sufficient to account for the very material difference in the per-bed cost of this hospital and that of the average hospital, which very seldom gets down to so low a figure as $1,000 per bed. In fact, few claim that it is possible to properly erect a hospital at $1,000 per bed.

There is, however, to be noted a broadening disposition to greater economy in the cost of hospital construction. Up to a very few years ago hospitals were planned by architects knowing practically nothing regarding hospitals and their needs the ornate received more attention than the practical. In most instances the patronage or revenues of these hospitals has not increased to a point to preclude a heavy annual deficit caused largely by the enormous overhead expense in connection with the maintenance of the building.

It is gratifying to note the tendency to reduce this overhead by the introduction of more sensible ideas in planning. The remedy lies in the economy in the planning and construction of the building. With the establishment of a new hospital there should be purchased a site sufficient for all possible future development. Then erect a main building such as will meet all needs under ordinary circumstances, having this so planned that it may be added to as required by means of additional units.

The Value of Hospital Records.

While during the past few years there has been marked improvement in the keeping of hospital records or histories, the work of so keeping and arranging these as to be of real value to those other than the physicians or surgeons having the cases in hand has not progressed as it should have. The enormous amount of hospital experience that is going to waste from a lack of proper record and that should be available to the ordinary, busy physician, either general or hospital, is an unnecessary loss and requires more attention than is now being given to it. It is not too much to say that the record or experience of one hospital physician is, in the main, only useful to himself alone. No other will have the patience to sift the wheat from the chaff of innumerable cases, recorded probably at great length and detail. The musty, dust-covered documents fill the hospital archives and represent untold labor on the part of the internes, themselves imbued with the true spirit of research, but working at random in a mass of data which an only too short life leaves undigested. There are in our hospitals daily many cases the proper histories of which would be of the greatest value to not only other hospitals but to the medical and surgical professions, and it should be made possible that these be so recorded and published that their full value may be generally utilized.—(*Int. Hosp. Record*, July 16, 1913.)

The Probationer's Training.

The value of nurse probationer's training depends in large measure on the extent of the opportunities afforded her for gaining experience, says the *International Hospital Record*. It is not clearly understood, however, that these opportunities depend less on the size of the hospital than on the system of training. It is in the power of the one in charge of the training to minimize the advantages which are presumably offered in a large institution, by limiting the work of the probationers to certain departments only, by keeping slow pupils at mechanical work, and by making use of the quick and eager ones to the detriment of their real grounding in the principles and practice of nursing.

Many superintendents who have had the advantage of experience in both large and small hospitals are unanimously agreed that the soundest training can be afforded to probationers in hospitals of the ordinary medium-sized type, which, by their simplicity of structure, make it possible to pass all probationers through each department in the course of their training. Such hospitals as a rule provide opportunities for a more thorough general training than can be given in the larger hospitals where specializing is more apt to prevail.

THERAPEUTIC MEMORANDA.

Analgesic and Antipyretic Action of Melubrin: Dr. Staffeld (*Muench. med. Woch.*, 1912, No. 33) was suffering for the third time from acute articular rheumatism, and therefore made a personal trial with Melubrin. The result was astonishing. While previous attacks lasted from three to four weeks, and were very painful, the pain disappeared on this occasion after 60 grains Melubrin had been taken. With this favorable experience, the author made further observations on patients. In fifty cases no by-effects on the heart, stomach, etc., were observed. If sufficiently large doses were administered, a very prompt diminution of the pain and fever was always noted, particularly where other medication had failed. If the preparation was given from the outset, a slight and not discomforting perspiration appeared, while in all cases treated with salicylic preparations perspiration was very marked. It was notable that the pulse, frequently irregular, became absolutely regular after 120 to 150 grains.

In sciatica 30 grain doses were administered, twice daily. Excellent results were obtained with the like doses of Melubrin in Herpes zoster and intercostal neuralgia after influenza. The favorable influence of the drug in pneumonia and bronchopneumonia was absolutely astonishing; children of 2½ to 3 years of age were given 4 to 5 grains of Melubrin at intervals of several hours.

In scarlatina also the author believes to have observed a certain remedial action.

A patient suffering from chronic articular rheumatism who had long been under treatment, lost the extremely violent pain after large doses of Melubrin, but could not be further treated per os, as in the meantime vomiting set in. After three enemas, each containing 45 grains Melubrin, the severest pains disappeared.

Effect of Melubrin on the Urine: Dr. K. Feri (*Berliner klin. Woch.*, 1912, No. 35) supplements the publication of Hoppe in respect of the urinary records and believes that the strong reducing property of Melubrin urine is perhaps partly due to the amido group of 4-amido-antipyrin, to which the characteristic properties of an aromatic amido group belong. Among these the marked tendency to oxidation plays an important role. On treatment of the urine of patients who have taken Melubrin with sodium nitrite solution and dilute hydrochloric acid, the light color becomes darker, and if a few minutes later a few drops of an alkaline solution of beta-naphthol be added, a beautiful red color appears, distinctly deepening on addition of acid. By substituting resorcin for beta-naphthol, a dark violet color is obtained which likewise is intensified by acids. The coloring matter may be extracted with amyl alcohol either from the alkaline or acid liquid. This reaction shows that the urine in these cases contains free 4-amido-antipyrin.

Means and Methods of Reducing the Death Rate from Surgical Operations. Marshall Clinton of Buffalo, in a paper on "Means and Methods of Reducing the Death Rate from Surgical Operations" (*N. Y. State Jour. of Medicine*, April, 1913) advocates the use of Crile's anoci-association for blocking off the operative field with Novocain. Farbwerke-Hoechst Company, New York.

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Therapeutic Remarks on Diabetes Mellitus.

In the treatment of Diabetes Mellitus we distinguish between remedies for the disease itself and for complications that may arise. Within the last few years numerous preparations promising a complete cure have made their appearance, but few of them have been able to reduce and even eliminate sugar secretions as effectively as Expurgo Anti-Diabetes (*Can. Jour. Med. and Surgery*). This preparation is successfully applied in some cases where sugar remains in spite of a diet free of carbohydrates. Experience has shown that this remedy has caused no bad effects whatever. Of course, an improvement without a strict observance of the diet regulations cannot be expected, but as this remedy is perfectly harmless, and has been used with excellent results, it should be tried in every case of diabetes. After a course of from five to eight weeks, during which time the strict diet has been gradually changed to a mixed diet, the toleration of carbohydrates will be noticed, and this favorable condition will remain even after the remedy is taken at longer intervals, to be finally dispensed with altogether.

Chronic Catarrhal Diseases.

Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying results that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastro-intestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are brought about through restoring the physiologic balance of the whole organism.

High Scientific Honor to Sanatogen.

The scientific exhibit held under the official auspices of the International Congress of Medicine in London was to many visitors one of the most interesting and important features. The jury of award, composed of distinguished medical men, conferred the highest award, the grand prize, upon Sanatogen. This honor is fully deserved, and it is a fitting climax to an extraordinary series of testimonials from thousands of the world's physicians. Men like von Noorden, Ewald, etc., have not hesitated to use the highest terms of commendation within their power, while Sanatogen will be found side by side in the best and most authoritative textbooks with the esteemed and most favorably considered dietetic agents in functional nervous disorders, gastro-intestinal trouble, anemia, tuberculosis, gout and chronic disease generally. Composed of pure, specially prepared albumen and the easily utilized sodium glycerophosphate, Sanatogen is pre-eminently a food-tonic for the nerves, while it is also remarkable for its speedy absorbability and practical absence of waste matter. Where meat cannot be digested and where, at the same time, protein is urgently demanded, Sanatogen will be found to supply this agent in a form that is greedily appropriated by the tissues; its exhibition, moreover, quickly strengthens the digestive and absorptive organs, soon enabling them to do alone their appointed work with the daily food intake.

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The PHYSICIAN'S BOOK, in its 215 pages, presents a brief survey of the Sanitarium, but nothing but a visit here will give an adequate understanding of the far-reaching purposes and effects of the Sanitarium. **The Physician's Book is mailed free on request to any physician.**

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Good Results of Gonosan.

Gonosan has practically no ill effects upon the digestice organs. Prof. v. Zeissel, of the University of Vienna, in reporting 116 cases (*Wien. Med. Presse*, 1905, No. 7), says:

"Gonosan very seldom provokes indigestion. In only three cases did I observe it, and in two of these after three days I was able to give Gonosan again."

Prof. Renault, of the Cochin Annexe, Paris, writes in *Gaz. des Hospitaux:*

"The action of Gonosan is quite harmless, and I recommend it on this account, for it does not affect either the stomach, bowels, skin or kidneys."

Kava Santal is of great utility in the treatment of urethritis of women. Runge, of Prof. Bumm's Clinic, Charité, Berlin, states (*Muench. Med. Woch.*, No. 5, 1905):

"The method I now employ in cases of urethritis in women is as follows: Beginning with the first day on which the patient presents herself, whether the disease be new or acute or of old standing, I give forthwith two capsules of Gonosan three times a day."

These opinions, selected from a vast number of similar reports, show that in action as well as in form, Gonosan is a balsam of original merit and may be called the logical coadjutor of local treatment.

Augmentation of Systemic Resistance to Infections.

Clinical experience seems to show quite clearly that certain infections may be reduced in severity by the administration of Ecthol (Battle). Thus in erysipelas and furunculosis, to select two infections which have responded to the internal use of Ecthol, it has been found that Ecthol exerted an influence on the process of a most beneficial nature, which probably is best explained by assigning to Ecthol the positive power of increasing the phagocytic action of the blood stream. Typhoid fever and smallpox are also diseases which indicate the employment of Ecthol.

Secretin as a Remedy in Gastrointestinal Disorders.

Henry R. Harrower, of London, England, finds secretin to be a specific excitant of all of the important digestive juices—pancreatic, gastric, hepatic and intestinal. It may be secured just as are other animal extracts, and it has the advantage of being a definite, stable preparation. It may be given by mouth with good results in the large class of gastrointesinal disorders described under the general head of "digestive insufficiencies." Such medication is absolutely physiological, as in certain cases it seems that secretin is a necessary substance which the body is not supplying in its normal amount (just as thyroidin supplies to the athyroidic a most necessary hormon, the lack of which happens to be more definitely manifest). Secretin is not a digestant, having no influence whatever comparable with that of pepsin or pacreatin, but its fundamental value is superior to these ferments, as well as to other forms of stimulation, such as strychnine, ginger, etc. The administration of secretin is quite harmless, causes no habit, and does not interfere with other orthodox treatment, and its administration may with advantage be associated with digestants. The use of secretin in various forms of indigestion is destined to become much more general and the treatment of gastrointestinal disorders augmented, if not revolutionized. —(*New York Medical Journal*, August 16, 1913.)

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THOS. TAGGART, Pres.

Venereal Diseases in New York.

On February 20, 1912, the Board of Health of the City of New York adopted resolutions that on and after May 1, 1912, the officer in charge of all public institutions be required to report promptly the name, sex, age, nationality, race, marital state and address of every patient under observation suffering from syphilis, in every stage, chancroid or gonorrhoeal infection of every kind (including gonorrhoeal arthritis), stating the name, character, stage and duration of the infection, the date and source of contraction of the infection, if obtainable, and that all physicians be requested to furnish similar information concerning private patients under their care, excepting that the name and address of the patient need not be reported.

The Department of Health agreed to provide facilities for the free bacteriological examination of discharges for the diagnosis of gonorrhoeal infections, and also vaccines for the treatment of such infections, and to make, without charge, the Wassermann and the Noguchi tests for the diagnosis of syphilis and examine specimens for spirochetes.

The cases reported during the twelve months following were as follows, by diseases and months:

1912.	Syphilis.		Gonorrhea.		Chancroid.		Total.
May	100		101		16		217
June	181		195		33		409
July	365		533		42		940
August	312		274		30		616
September	379		439		60		878
October	351		419		45		815
November	530		458		64		1,052
December	267	(10)	423	(5)	44	(1)	734
1913.							
January	960	(24)	509	(8)	32		1,501
February	648	(11)	482		52	(1)	1,183
March	762	(15)	825	(7)	58		1,645
April	911	(11)	627	(4)	45		1,583
Totals	5,767		5,285		521		11,573

All figures in parenthesis denote out-of-town cases which are included in the totals for months given.

In order to provide the basis for a somewhat better estimate, the Department, in December, 1912, institute a special inquiry by sending a circular to the 7,000 physicians of Greater New York, requesting a report merely of the number of cases observed in their private practice during the year 1912. The results of this special census were:

Number of physicians inquired of	7,000
Number of physicians responding	2,217
Number of cases reported as observed by physicians in 1912:	
Syphilis	13,350
Gonorrhea	24,984
Chancroid	4,331
	42,665
Number of institutions inquired of	197
Number of institutions responding	10
Number of cases reported observed at institutions in 1912:	
Sphilis	1,849
Gonorrhea	3,477
Chancroid	336
	5,662

The Bulletin of the Department says in this connection:

Even these figures furnish but a poor basis for an estimate of the prevalence of venereal diseases in New York. Only a third of the physicians have given statistics, and there is no certainty that the figures do not in some instances represent duplication of visits by the same patient. It is safe to assume, however, that in a city as large as New York in which no attempts have ever been made to limit the transmission of venereal diseases, and in which, up to the present time, their treatment by hospitals and dispensaries has been more or less perfunctory, the number of cases must be very large indeed, and that this number must continually tend to increase. The terrible ravages of syphilis are best appreciated, perhaps, by those physicians outside of venereal clinics who are connected with ophthalmological and neurological institutions, where the later stages of syphilis, the cases of optic atrophy, locomotor ataxia and general paresis are constantly in evidence. In a certain general medical clinic the Wassermann reaction performed indiscriminately as a matter of routine in a series of cases was positive in 20 per cent. The statistics recently promulgated by the Department of Health show conclusively that while the death rate of persons under 45 has greatly diminished during the past thirty years, the death rate of persons over 45 has increased, and that this increase has been due in large part to the greater prevalence of diseases of the heart, kidney and nervous system. The interesting speculation at once arises as to whether this greater prevalence may not be due to an increase of syphilis, which, as has been recently shown, is an active cause of diseases of the heart and kidneys, and, as is well known, is a prominent factor in nervous diseases. One of the foreign delegates to the Congress of Hygiene and Demography held in Washington in September, 1912, who afterwards visited many of the hospitals throughout the country, is said to have stated that nowhere in the clinics of Europe had he seen anything like the large number of cases of syphilis and its final results as were to be found in the clinics of America, and that unless the medical authorities of the United States speedily took some efforts to combat its spread, syphilis would cause the deterioration of the American people. This statement of a mild and friendly critic, coupled with such statistics as we have, meager though they are, certainly furnishes food for profound reflection.

The department has for some months conducted two diagnostic clinics for venereal diseases, where physicians may send patients for Wassermann tests for syphilis, for the complement deviation test for gonococcus infection, and for microscopical examination for treponema pallida. Under no circumstances are the results of these examinations communicated to anyone but the physician sending the cases. All the examinations are made free of charge.

Fairchild Bros. & Foster, New York, have been awarded a gold medal for Physiological Pharmaceutical Preparations at the exhibit in connection with the International Conference of Medicine held in London in August.

F. P. Gegenbach of Denver (*J. A. M. A.*, Aug. 23) reports a case of precocious menstruation in a two-year-old baby.

RESPIRAZONE

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Send for Literature

The Jackson Health Resort, Dansville, New York

A School for Public Health Officers.

Beginning this fall Harvard University and the Massachusetts Institute of Technology are to maintain in co-operation a School for Public Health Officers. The facilities of both institutions are to be available to students in the school and the Certificate of Public Health (C. P. H.) is to be signed by Presidents Lowell and Maclaurin.

The object of this school is to prepare young men for public health work, especially, to fit them to occupy administrative and executive positions such as health officers or members of boards of health, as well as secretaries, agents, and inspectors of health organizations.

It is recognized that the requirements for public health service are broad and complicated, and that the country needs leaders in every community, fitted to guide and instruct the people on all questions relating to the public health. To this end, the instruction of the new school will be on the broadest lines. It will be given by lectures, laboratory work, and other forms of instruction offered by both institutions, and also by special instructors from national, state and local health agencies.

The requirements for admission are such that graduates of colleges, or technical and scientific schools, who have received adequate instruction in physics, chemistry, biology and French or German, may be admitted to the school. The medical degree is not in any way a pre-requisite for admission, although the administrative board strongly urges men who intend to specialize in public health work to take the degree of M. D. before they become students in the School for Health Officers.

The administrative board which will conduct the new school is composed of Professors William T. Sedgwick, of Technology; Milton J. Rosenau, of Harvard, and George C. Whipple, of Harvard. Professor Rosenau, of Harvard, has the title of Director, and the work of the School will be under his immediate supervision.

Drop doses of Fowler's solution, hourly, will check nausea and vomiting.

More Phylacogen Figures.

"Case histories of 6,324 patients treated with Phylacogens have been sent to us by the attending physicians. They show 5,270 recoveries—83 per cent."

This statement has just been issued over the signature of Parke, Davis & Co., and a very impressive pronouncement it is. If there are members of the medical profession who have been wont to question the therapeutic efficacy of the Phylacogens, that "83 per cent. of recoveries" should quickly remove their skepticism.

A Practical Detail in Connection With the Wassermann Reaction.

It has been definitely proven that failure to obtain a positive reaction from the Wassermann test is due not infrequently to encasement of the spirochaeta by the tissues. Clinical investigations have shown the wisdom, therefore, after a negative Wassermann, of administering iodine for two or three weeks and then repeating the test. If the spirochaeta are present but encased in the tissues, the iodine will dissolve them from their protective surroundings and throw them out into the blood stream. Because of the foregoing, many competent observers are making it a routine practice—if a first Wassermann test is negative—to administer Burnham's Soluble Iodine 10 to 20 minims in a half glass of water three times a day for two weeks, and then repeat the test, before giving a final opinion.

Incidentally this property of releasing the syphilitic organisms from the tissues, emphasizes the great value of iodine in the treatment of secondary or tertiary syphilis. Without this action of iodine neither mercury nor any other powerful remedy can get to the germs to destroy them. Burnham's Soluble Iodine is undoubtedly the most serviceable iodine preparation in these cases owing to its rapid absorption, notable physiologic activity and gratifying freedom from all disagreeable or injurious effects on the stomach or intestinal tract. For valuable data on the use of iodine, address, Burnham Soluble Iodine Co., Auburndale, Mass.